GRADUATE CATALOG
2021-2022
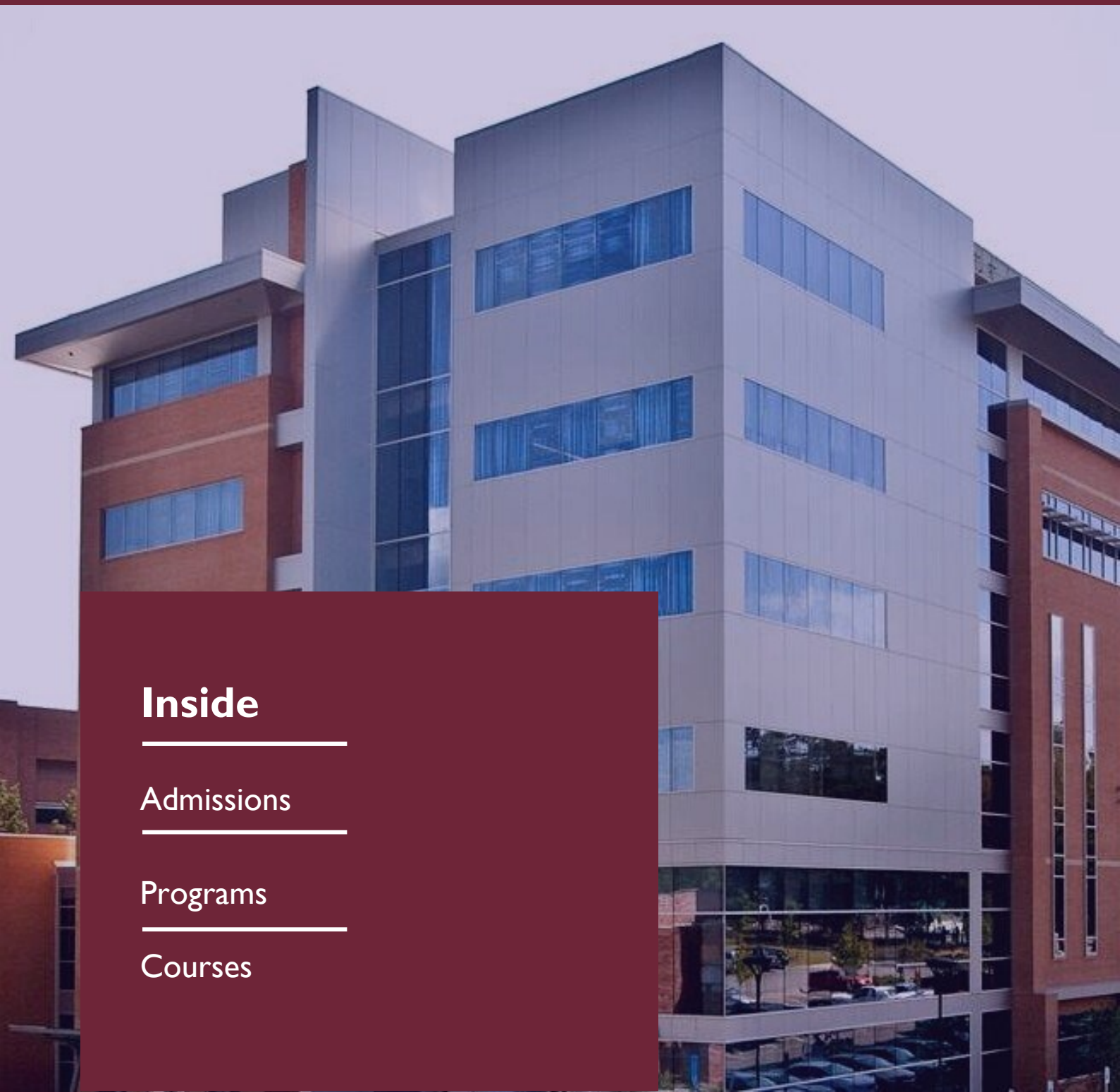
UA LITTLE ROCK

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2021-2022

GRADUATE CATALOG

Christy Drale, Ph.D.
Chancellor

Accreditation

The University of Arkansas at Little Rock is fully accredited by the Higher Learning Commission, a regional accreditation agency recognized by the U.S. Department of Education.

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

The Higher Learning Commission 230
South LaSalle Street, Suite 7-500
Chicago, IL 60604
Phone: (800) 621-7440/ (312) 263-0456
Fax: (312) 263-7462
www.hlcommission.org

Additional Accreditations and Affiliations

UA Little Rock is designated a Military Friendly® School by Victory Media, the leader in successfully connecting the military and civilian worlds.

Specific degree programs are also accredited or affiliated with many external accrediting/certifying bodies. A complete list is located on the UA Little Rock Accreditation website at ualr.edu/accreditation.

ABOUT THE GRADUATE CATALOG

The Graduate Catalog is an official publication of UA Little Rock published annually by the Office of the Provost in conjunction with the Office of Records and Registration.

Curriculum and policy revision is regulated by the Undergraduate Council, Graduate Council, and Council on Core Curriculum and Policies of the Faculty Senate in conjunction with the Office of the Provost while adhering to rules and regulations of applicable accreditation organizations.

The online version of the catalog is a snapshot of the printed version also updated annually or when substantive mistakes are identified.

Please note: The printed version is a replica of the Adobe PDF version available online and is used to determine graduation requirements.

Copies of previous catalogs (Archived Versions) may be found on the catalog archive website and hard copies of every year are kept in the Office of Records and Registration.

This catalog establishes the graduation requirements set forth by a specific program of study within each college. Typically, students who enter a program within UA Little Rock, follow the program of study listed for the academic year the catalog is published. Each college within UA Little Rock reserves the right to change graduation requirements for their program. Students should meet regularly with their academic advisors to be certain that they are aware of any changes in graduation requirements that may apply to them.

Admission to UA Little Rock in any program of study does not guarantee that the university will continue to offer that program of study indefinitely. UA Little Rock reserves the right to change, phase out, or discontinue any program at any time in the best interest of the University.

The Graduate Catalog provides information about degree programs, course offerings, and academic regulations that affect Graduate students. The catalog is compiled and edited by the Office of the Provost, with assistance from college associate deans and department chairpersons.

RIGHT TO CHANGE

Any policy, course listing, website, catalog, or class schedule is only intended to announce available courses and applicable policies. If a course appears in this catalog or any other publication, it should not be regarded as a guarantee. Keeping within standards set by other universities with the University of Arkansas System, UA Little Rock reserves the right to:

- add or delete courses or programs from its offerings,
- change times, locations, or instructors of courses or programs,
- modify academic calendars without notice,
- cancel any course for insufficient student registrations, or
- revise regulations, charges, fees, schedules, courses, requirements for degrees, and any other policy or regulation affecting students whenever it is considered to be in the best interests of UA Little Rock.

HOW TO GET HELP

Often the information you need can be obtained on the UA Little Rock website at ualr.edu or by telephone at 501-569-3000. Departmental numbers are included in their respective sections within the Catalog.

For other numbers, consult the University Directory and search for the office title that matches your needs; the Office of Graduate Admissions and the Office of Records and Registration are most often needed by incoming students.

These offices are located on the second floor of the Charles W. Donaldson Student Services Center.

Academic program coordinators provide Advising to Graduate Students. If you have a problem or concern regarding student life on campus or have a question about student judicial affairs, start at the Student Experience Center, located on the upper level of the Donaghey Student Center.

The Information Center is also located in the Donaghey Student Center on the first floor across from the bookstore; personnel there can assist you with specific questions.

Department chairpersons and deans are appropriate people to contact for any academic problem at any time. All academic units are under the direction of the provost and executive vice chancellor.

The Catalog provides you with background information about the university and available programs. You will also find other important information to assist you. Information can be accessed via college and departments sections and via program listings and course descriptions. Each of these sections describes the requirements for major and/or minor programs. Most courses are scheduled at least once every two years. The Interdisciplinary Studies section lists degree programs that involve work in more than one department or college.

About UA Little Rock

ACCREDITATION

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

- UA Little Rock is a Service-Members Opportunity College.

- Specific degree programs are also accredited or affiliated with many external accrediting/certifying bodies. A complete list is located on the Accreditation website.

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 UA Little Rock.

The Executive Vice Chancellor and Provost is in charge of all Academic Affairs and is the chief academic officer of UA Little Rock. The Provost provides academic and administrative leadership in the area of academic and faculty affairs. (See organizational chart.) 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 UA Little Rock'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

Tuition, Fees, Payments, & Refunds

The following tuition and fee information was subject for approval at the time of publication. For the most accurate and comprehensive tuition and fee information, visit 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. UA Little Rock 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 Admissions and Financial Aid.

2020-2021 TUITION AND FEES

GRADUATE TUITION (PER CREDIT HOUR)

Arkansas Residents

Per Semester Credit Hour	$320.00
College of Business/EIT Courses	$345.00

Nonresidents

Per Semester Hour	$725.00
College of Business Courses	$740.00

FEES FOR ALL STUDENTS (PER CREDIT HOUR)

In addition to the tuition per hour, there are fees associated with each class.

For the most accurate and comprehensive tuition and fee information, visit the Bursar's webpage, ualr.edu/bursar.

Parking Fees

Every student who parks a motorized vehicle on the main UA Little Rock 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 UA Little Rock's parking deck. The fee for parking in the meter lots is $1.00 per hour using coins or, if paying by credit card it is $3.00 minimum for two hours and additional hours may be added at $1.00 per hour at initial point of sale. The fee for the parking deck is $1.00 per exit.

Visitors may park in any of the metered parking lots, the fee for parking in the meter lots is $1.00 per hour using coins or, if paying by credit card it is $3 minimum for two hours and additional hours may be added at $1.00 per hour at initial point of sale or they may park in the parking deck for a fee of $1.00 per exit.

PAYMENTS

BURSAR OFFICE

The Cashier's Office provides billing, receipting, and cashiering functions for student tuition and fees to assure accurate, timely, and effective service to students, as well as providing receipting and deposit functions for the University departments. We also distribute payroll and accounts payable checks and request and disburse all travel advance checks. You can contact the Cashier's Office by calling (501) 569-8757 or by emailing cashiers@ualr.edu.

The Student Accounts Office provides student billing, third party sponsorship posting, tuition discounts, and collection processes. You can contact the Student Accounts Office by calling (501) 569-3450 or by emailing studentaccounts@ualr.edu.

Refunds when withdrawing from UA Little Rock

Students voluntarily withdrawing from UA Little Rock 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 UA Little Rock website. Students who fail to officially withdraw will be reported as having failed the coursework 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.

Notes:
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.

Students who officially withdraw from UA Little Rock (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:

Semester	100%	50%
Sixteen-week courses (Fall & Spring)	First through the fifth-class day	Sixth through the tenth-class day
Ten to twelve-week courses	First through the fifth-class day	Sixth through the tenth-class day
Seven to nine-week courses	First through the third-class day	Fourth through the seventh-class day
Five or six-week courses	First and second-class day	Third through the fifth-class day
One to four-week courses	Prior to start of classes	N/A

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. Students who reduce their course load by dropping one or more courses may or may not be entitled to a reduction in charges.

Refund schedules for current terms may be found in the UA Little Rock Bursar's Office.

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 American Opportunity 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

Responsibility of Tuition and Fee Payment

By enrolling in classes at the University of Arkansas at Little Rock, a student makes a financial commitment to pay the tuition and fee charges associated with that enrollment. Students withdrawing after the stated refund dates remain liable for full tuition and fee charges. Collection costs incurred in the event of delinquency shall be at the expense of the borrower, at a rate not to exceed 33.3% of the balance owed. Although the university accepts payment via student financial aid and third-party sponsorship, the responsibility for payment remains with the student. If financial aid is not granted or if third-party sponsors do not pay within a reasonable period, the student will be required to pay the full amount due.

Student Life, Activities, & Services

ACADEMIC SUCCESS CENTER

Speech Building, Room 101 | (501) 569-3280 | (501) 569-3420 (fax) | ualr.edu/ualrworks/academic-success-center-2

The Academic Success Center (ASC) offers multiple services designed to assist students in learning the tools to be academically successful at UA Little Rock 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 6:00 p.m. Monday through Thursday, and 7:30 a.m. to 5:00 p.m. on Friday. The ASC houses 5 distinct programs:

1. **Supplemental Instruction** (SI) is an academic support program utilizing peer-assisted study sessions to enhance student performance and retention through a series of weekly discussion and review sessions for students taking courses that have proven difficult for students in the past,

2. **Academic Progress Program** (APP) consists of services offered to students experiencing academic challenges by equipping them with academic tools in order to help them achieve good academic standing,

3. **The Program for Enhanced Learning** (PEL) provides developmental courses in reading and writing open to all students,

4. **TRiO Student Support Services** (SSS) is a federally supported program aimed at providing additional academic support and assistance to traditionally underrepresented populations, and

5. **TRiO Ronald McNair Scholars** is one of the Federal TRIO Programs governed by the United States Department of Education and is designed to help underrepresented undergraduate students who would like to attend graduate school and pursue their doctorate degree.

ADULT LEARNERS (NONTRADITIONAL STUDENTS)

An 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 Student Experience Center 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 UA Little Rock offers. Additional information may be found on the website ualr.edu/campuslife/ntsp/about-non-traditional-student-programs or by calling (501) 569-3308.

ALUMNI ASSOCIATION

The UA Little Rock 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, is 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 UA Little Rock 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 UA Little Rock Bookstore is located in the Donaghey Student Center complex and is the book center for UA Little Rock. 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 UA Little Rock 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 upon 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.

STUDENT EXPERIENCE CENTER

Students involved in the Student Experience Center gain valuable experience in building teamwork, planning events, working with diverse personalities and populations and much more! Services, programs, and events include the following:

- Allocation & Administration of Student Activity Fees

- Campus Recreation: Intramural Sports, Fitness/Wellness Programs & Outdoor Adventures

- Diversity Programs & Mentoring

- Fraternity/Sorority Life

- Leadership Development

- New Student Orientation

- Peer Tutoring Referrals

- Special Events & Cultural Observances

- Student Government Association

- Student Organization Registration & Advisement

- Student Support Programs & Services: Women, Non-Traditional, Commuter & First Generation

- The UA Little Rock Forum Student Newspaper

- University Program Council

  The Student Experience Center 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 UA Little Rock 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 Student Experience Center (501) 569-3308.

CHANCELLOR'S LEADERSHIP CORPS

The Chancellor's Leadership Corps (CLC) enrolls 225 new scholars each year based on the basis of academics, 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. The program has a four-year curriculum guide. Class enrollment is limited to CLC Scholars which ensures smaller class sizes and class engagement. Each course is designed with the scholars and their futures in mind. All coursework is interactive, engaging, hands-on and designed upon the foundations of theory. For more information contact Financial Aid at (501) 569-3035 or visit ualr.edu/financialaid.

CAREER CENTER

Students can connect to education and employment opportunities through the Career Center. The Center coordinates internships and cooperative education experiences, which offers students work experience related to their academic area of interest. The Center also offers resume and cover letter writing assistance, in addition to assistance with interviewing skills. To learn more, please visit the Career Center website at ualr.edu/careers or email the Center at careers@ualr.edu.

COUNSELLING 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 their ualr.edu/counseling.

DISABILITY RESOURCE CENTER

The Disability Resource Center collaborates with faculty, staff, and students to make UA Little Rock 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 UA Little Rock 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 benefit all students at UA Little Rock. 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 Information Desk is located on the first floor of the Donaghey Student Center, Room 101. An attendant is available from 8:00 a.m. to 6:00 p.m. Monday through Thursday, and 8:00 a.m. to 5:00 p.m. on Friday.

OFFICES IN THE DSC

Office	Number
Administration, (Room 101)	(501) 569-8078
General Office	(501) 569-3362
Aquatics, (Room 106)	(501) 371-8011
Student Experience Center, (Room 216)	(501) 569-3308
Conference Services, (Room 210A)	(501) 569-3324
Dining Services, (Room 211B)	(501) 569-3361
Disability Resource Center, (Room 103)	(501) 569-3143
Educational, Student Services, & Student Life, (Room 215)	(501) 569-3328
Equipment Services, (Room 106D)	(501) 569-8284
Environmental Services, (Room 101)	(501) 683-7127
Fit/Well, (Room 109D1B)	(501) 569-3228
Information and Call Center, (Room 101A)	(501) 569-3362
Intramural teams, (Room 109D1C)	(501) 683-4911
Health Services, (Room 102)	(501) 569-3188
Reception Services, (Room 101D)	(501) 569-3413

GRADUATE STUDENT ASSOCIATION

Every UA Little Rock graduate student is a member of the Graduate Student Association (GSA). The GSA is the voice of UA Little Rock's graduate students, advocating for their interests, hosting social, professional, and academic events throughout the school year, and sponsoring an annual research forum at which graduate students present their scholarly works

The GSA is led by the Executive Team, composed of President, Vice President, Treasurer, Secretary, Social Media Director, and Parliamentarian. Senators act as liaisons between Colleges and the GSA as a whole. This format promotes dialogue between Colleges and encourages productive academic and social relationships between students. In addition, the Executive Team consults with various campus committees and administrative groups on behalf of the graduate student body and helps the GSA with a variety of programs throughout the year, such as workshops, recruitment, and the Student Research and Creative Works Expo.

The GSA performs its duties through monthly meetings, open discussion, and committee work. Senators of the GSA exercise their full rights as representatives by attending and participating in these monthly meetings.

As part of its representation of the GSA before the Graduate School and the University, the GSA elects student representatives to attend the Graduate Faculty Council (GC) and to serve on the GC's two subcommittees, the personnel subcommittee, and the curriculum subcommittee. The GSA members that attend the GC will provide feedback to the GSA from the meetings about issues relevant to the student body. For more information on the GSA, you can visit its website ualr.edu/gsa or email gsa@ualr.edu.

GREEK ORGANIZATIONS

UA Little Rock 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 Student Experience Center, (501) 569-3308.

HEALTH SERVICES

Health Services Health Services is an ambulatory medical clinic that provides inclusive, evidenced-based, quality health care and wellness promotion to students and employees of UA Little Rock.

Health Services is a department within the Division of Student Affairs and is conveniently located in the Donaghey Student Center (Suite 102) next to the Information Desk and across from the bookstore. The medical staff includes board-certified Advanced Practice Registered Nurses, Registered Nurses, and a Consulting Physician.

SERVICES

Services include physical exams; evaluation and treatment for illnesses (including prescriptions when needed); STD screening and treatment; birth control; pap screening; allergy injections; international travel consultations; and referrals to specialists as needed. The health promotion program includes free consultations on nutrition, weight management, smoking cessation, and exercise planning.

Students are encouraged to complete the medical history form found at ualr.medicatconnect.com within the first week of classes.

HOURS OF OPERATION

Monday – Friday: 8:00 a.m. – 5:00 p.m.

HOW TO ACCESS CARE

Schedule an appointment by calling 501-569-3188.

COST

The student health fee, included in tuition costs, currently covers the cost of office visits. There are additional charges for labs, certain procedures, and vaccines. All charges are posted to the student's account and must be paid in full before the end of each semester.

HOUSING

Living on campus at UA Little Rock 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.

UA Little Rock offers a variety of housing options to meet the needs of a diverse student body. Each of the four halls and the new University Village are equipped with amenities such as furnished rooms, Internet access, cable connections, and reserved student parking. And let's not forget about laundry, fitness and recreation areas, and the UA Little Rock Dining Experience.

Review the choices and decide which one best fits your needs before completing the housing application.

UA Little Rock adheres to all federal and state regulations and guidelines regarding nondiscrimination in housing. Inquiries may be made to the Campus Living at (501) 661-1743.

INFORMATION CENTER

The Information & Call Center is located on the first floor of the Donaghey Student Center (DSC), Room 101. A team representative is available at the desk during our regularly scheduled hours to assist you.

The Information Center is open from 7:30 a.m. to 6:00 p.m., Monday through Thursday and 7:30 a.m. – 5:00 p.m. Friday (during regular sessions). The Information Center's telephone number is (501) 569- 3362.

INTERCOLLEGIATE ATHLETICS

The UA Little Rock 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.

INTRAMURAL SPORTS AND CAMPUS RECREATION

The purpose of the Office of Campus Recreation is to provide opportunities for a diversified population to recreate, exercise, and socialize through a 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**– Offers approximately thirty (30) group exercise classes, personal programming, personal training, incentive programs, personal assessments, and CPR/First Aid classes during the academic year.

- **Intramural Sports** – Offers approximately fifteen (15) individual and/or team sports during the academic year.

- **Outdoor Adventures**– Offers students the opportunity to experience the outdoors through the rental of camping equipment.

ALL STUDENTS

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

GRADUATE STUDENTS

In addition to the UA Little Rock Student Handbook, graduate students are further required to familiarize themselves with the Graduate Student Handbook, Dissertation and Thesis Guideline, and the UA Little Rock Graduate Catalog.

STUDENT ORGANIZATIONS

There are more than 150 student organizations and clubs registered at UA Little Rock. 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 Student Experience Center.

STUDENT PUBLICATIONS

UA Little Rock recognizes three official student publications on campus.

1. EQUINOX is a student-run journal of contemporary literature and art at UA Little Rock.

2. THE FORUM is the UA Little Rock 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 UA Little Rock Writers' Network, an organization dedicated to spotlighting the importance of writing in society.

STUDY ABROAD

Administration North, Room 205, (501) 569-3376, ualr.edu/studyabroad
Study abroad at UA Little Rock 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 Spain. The photo opportunities are just part of the big picture – UA Little Rock 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 the website.

TESTING SERVICES

Student Services Center, Room 315, (501) 569-3198, Website

Testing Services provides 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 policies 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 UA

Little Rock 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 Student Experience Center. 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 UA Little Rock students. UPC meets every Wednesday at 5:00 p.m. in DSC 201T. If you would like more information about the University Program Council, please contact the Student Experience Center at (501) 569-3308 or visit the website.

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 UA Little Rock 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 five 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 UA LITTLE ROCK, GRADUATE SCHOOL

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

Vice Provost for Research and Dean of Graduate School:
Dr. Brian Berry
Interim Associate Dean of Graduate School and Associate Professor of Rhetoric and Writing:
Dr. Karen Kuralt

The UA Little Rock Graduate School is the central administrative unit providing leadership, coordination, and services for graduate students. Together with the university's graduate programs, departments, colleges, and the Graduate Council, the Graduate School shares responsibility for recruiting graduate students, as well as publicizing, managing, and developing graduate programs.

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 questions or problems related to their graduate education. Staff members also welcome online video conferences and phone calls from students, including those in online programs.

The Graduate School staff coordinates the following processes for graduate students and faculty:

- Processing applications

- Answering application and enrollment questions

- Maintaining student records

- Answering questions about appointing graduate assistants

- Processing tuition and stipend payments for graduate assistants

- Writing and designing promotional materials for graduate programs

- Assisting program coordinators with recruiting and marketing

- Generating reports on application and enrollment trends

- Providing logistical support for both the Graduate Council and the Graduate Student Association (GSA)

VISION

The UA Little Rock Graduate School will offer its students (part time, full time, military, and veterans) a high impact learning experience by creating collaborative relationships to ensure future success. The Graduate School will partner with other units on campus to continually foster an inclusive and family-friendly environment where a diverse student body thrives intellectually, becomes career ready, and is prepared for lifelong success.

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 mission of UA Little Rock Graduate School is to provide a high-quality educational experience through a wide range of academic programs. UA Little Rock is a community engaged, research metropolitan university located in the capital city and the largest metropolitan area of the state. Consistent with that mission, UA Little Rock Graduate School serves the needs of a diverse community by preparing our students for career readiness and lifelong success. The Graduate School will accomplish this through:

1. **COLLABORATION**: To foster community/civil engagements.
2. **EDUCATION**: To support enhancement and encourage high impact learning through quality education experiences on both the main campus and our online campus through Graduate Certificates, Master's and Doctoral programs.
3. **EFFICIENT SUPPORT STRUCTURE**: To offer stream-lined processes to help students including historically marginalized populations succeed, as well as faculty engaged in the graduate programs.
4. **SIGNATURE EXPERIENCES**: To provide opportunities such as, but not
limited to, research/creative activities, competitions, workshops and social networking events, in collaboration with academic units, to complement the learning experience. The UA Little Rock 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 UA Little Rock Graduate Council, 1989)

ORGANIZATION

The UA Little Rock Graduate School was created as a distinct academic and administrative unit in 1977, although graduate coursework had been offered since 1975. The dean of the Graduate School reports to the Provost and Vice Chancellor for Academic Affairs. The day-to-day operation of individual graduate programs is the responsibility of the graduate program coordinators and graduate faculty of the academic departments. The Graduate Council, commissioned as a committee of the Faculty Senate, approves additions and changes to graduate programs, including admission requirements, graduation requirements, program curricula, and graduate faculty members. The Graduate Council recommends policies for approval by the Faculty Senate.

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. Degree-seeking graduate students should contact their advisors each semester to ensure that they make satisfactory progress toward graduation.

A full list of our programs can be found here.

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.

ADVISING

Graduate students must be advised each semester before enrolling. Program coordinators will inform students about specific advising procedures when students are first admitted. All degree-seeking students should work closely with their advisors to prepare a plan of study, which will include a list of degree requirements and a projected schedule for completing them

FALSIFYING THE GRADUATE SCHOOL ADMISSIONS APPLICATION

UA Little Rock 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 discovery occurs	Then
Before the application is complete	The application will not be processed and the student will not be admitted
After admission, but before the student enrolls	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. Financial aid will be terminated retroactively, and all awards made to the student (including tuition) must be repaid
After a degree or certificate has been awarded	The degree or certificate will be revoked

Under none of these circumstances will the applicant receive a refund of their 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.

COURSE AUDIT

To audit a course means to attend class (whether on campus or online) with no expectation of active involvement in class activities such as assignments, exams, or instructor feedback. Students who wish to audit a course must follow regular admission and registration procedures, pay full tuition and fees, and are subject to the university's academic and behavioral policies. At the end of the semester, students auditing a course are usually assigned a grade of NC (no credit). Audited courses do not count toward fulfilling degree requirements; they also do not count toward enrollment hours required for a half-time or full-time graduate assistantship. Graduate students should contact the UA Little Rock Office of Financial Aid to determine how auditing a course might affect their eligibility for financial aid awards.

COURSE LOAD

Fall and Spring Semesters:
For most purposes, 9 hours is full-time enrollment for graduate students.

Summer Term:
For graduate students, 3 hours in any summer term constitutes full-time enrollment.

Students who receive Federal Financial Aid, VA benefits, or other aid may be required to enroll in more hours per term in order to receive aid. 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

UA Little Rock's schedule change procedures and deadlines are available on BOSS. After the end of the late registration period for each semester, any schedule changes must be approved by the student's graduate coordinator.

COURSE NUMBERS AND CREDIT LIMITS

- Courses at the 7000-level or higher are reserved for graduate students.

- Courses with 5000-level numbers are dual-listed (4000/5000) for both undergraduate and graduate credit. Programs often limit the number of 5000-level courses that graduate students may count toward their degrees. (For details, see the section titled Limits on 5000-level courses below.)

- Course numbers 1000-4999 (undergraduate courses) and 6000-6999 (UA Little Rock Bowen School of Law) are not included in this catalog.

- For all UA Little Rock course numbers, the second digit indicates the number of credit hours earned for the course.

I. LIMITS ON 5000 - LEVEL COURSES

Individual graduate programs typically limit the number of hours that can be repeated for credit between the 4000- and 5000-level to no more than two courses. UA Little Rock students who have completed a 4000-level class as part of a baccalaureate degree may sometimes be able to receive credit for taking the 5000-level version of the course at the graduate level if 1) the program indicates in the course description of the 5000-level course that this is allowed, and 2) the program coordinator and course instructor approve the enrollment. 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-level or above. Individual graduate programs may allow even fewer 5000-level hours. During advising, students should verify with their program coordinators that their degree plans do not exceed the number of 5000-level hours allowed by their program.

II. 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.

III. NON- PROGRAM GRADUATE COURSES

Graduate students may be able to take graduate-level courses in academic departments outside of their own program and count those courses toward their degree as electives. Students should get their advisor or program coordinator's approval before taking outside courses for elective credit.

IV. COURSES APPLIED TOWARD TWO DEGREES

For graduate programs awarded solely at UA Little Rock, courses can be counted according to the following:

i. Two Graduate Degrees in Distinct Disciplines (as determined by the program)

No more than 12 graded semester credit hours (research hours will not be double-counted), subject to the following conditions:

- Both degrees are completed within the time allowed

- Written approval of both graduate program coordinators

- Written approval of the Graduate School dean

ii. Master's or Specialist Degree en route to Doctorate in Same Discipline

Upon recommendation by the graduate program, a doctoral candidate may earn a master's or specialist's degree in the same discipline, upon completion of the master's or specialist's degree requirements or upon completion of specific requirements established by the program. The master's or specialist's degree may not be awarded retroactively. The candidate must apply for graduation by the appropriate deadline.

If a student has earned a master's or specialist's degree in the same discipline from another university, the student will not be awarded another equivalent master's or specialist's degree from UA Little Rock.

iii. Completed Master's or Specialist's Degree and Doctoral Degree

All graded semester credit hours (research hours will not be double-counted) earned from a master's or specialist's degree awarded by UA Little Rock within the past seven years may be double-counted towards a doctoral degree. Policy is at the discretion of each graduate program. If either program prohibits double-counting, the prohibition applies to the other program as well. Contact the programs for more information.

iv. Completed Graduate Certificate and Graduate Degree

All graded semester credit hours (research hours will not be double-counted) earned from a graduate certificate awarded by UA Little Rock in the past seven years may be double-counted towards a higher degree. Policy is at the discretion of each graduate program. If either program prohibits double-counting, the prohibition applies to the other program as well. Contact the programs for more information.

v. Two Graduate Certificates

Double-counting is not allowed.

There are other dual degree programs involving UA Little Rock and other campuses that are not subjected to this policy.

The concurrent Master of Business Administration/Juris Doctorate degree program is offered through the UA Little Rock Main Campus in conjunction with the UA Little Rock Bowen 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.

The Master of Social Work degree can be earned in conjunction with a Juris Doctorate. This program allows students to earn credits that will be counted towards both degrees.

I. UNDERGRADUATE STUDENTS IN GRADUATE COURSES

Undergraduate UA Little Rock 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 UA Little Rock. Note: The limits described in this section do not apply to undergraduate students who are accepted into early entry graduate programs. For details about early entry programs, see the first paragraph of the catalog section labeled Undergraduate Dual Credit Programs at Graduate Admissions

II. 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 UA Little Rock 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.

III. 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.

GRADING AND GRADING POLICIES

I. GRADING SYSTEM AND GPA CALCULATION

The graduate grading system used by UA Little Rock is:

A -- superior work;	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.
B -- average work;	
C -- unacceptable work;	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.
D and F -- failing work;	
I, incomplete;	The semester grade report shows both the semester GPA and a cumulative GPA based on all graduate work taken at UA Little Rock.
IP, in progress,	
CR/NC, credit/no credit;	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.
AU, audit; and	
W, withdrawal.	

II. CREDIT/NO CREDIT GRADE (CR/NC)

Credit (CR) or No Credit (NC) may be given in certain courses instead of the usual letter grades. In most cases, a student may elect to take no more than one course each semester on a CR/NC basis, and students should be aware that multiple NC grades may negatively affect their eligibility for federal financial aid. Students must request the course instructor's approval to use CR/NC grading, and that approval must be given at the beginning of the course. Courses for which a department requires CR/NC grading are not included in this limitation.

III. WITHDRAWAL GRADE (W)

A withdrawal (W) is recorded when a student drops a course after the end of special late registration or withdraws from all university coursework during a semester. A pattern of course or semester withdrawals can indicate unsatisfactory progress and may lead to dismissal from the graduate program, dismissal from the Graduate School, or loss of federal financial aid. If extenuating circumstances have forced a student to withdraw, the student may be able to appeal a loss of financial aid and/or apply for academic clemency. Students should consult with their program coordinator or the staff of the Graduate School for help with filing a Satisfactory Academic Progress (SAP) appeal or applying for academic clemency if needed.

IV. INCOMPLETE GRADE (I)

A student may be given an incomplete grade (I) when the instructor deems that circumstances beyond the student's control

prevented timely completion of course requirements. Instructors should 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.

A grade of I is given by the instructor only after consultation with the student. The student must be informed in writing of the work to be completed and the date by which the work must be completed. The instructor must also file a copy of this written notice with the department chair.

Graduate students have one year to complete work for courses in which they have received an incomplete grade. The instructor must submit a grade change in order to change the I to a letter grade. If the instructor does not convert the incomplete grade or submit an extension request within one year, the incomplete grade will be converted to an F. Students with multiple incompletes may be restricted in the number of hours they may take in a subsequent semester; two or more semesters of incomplete grades may also negatively affect the student's eligibility for federal financial aid.

If the instructor agrees to extend the time limit for the incomplete coursework, the instructor must submit a request to the Office or Records and Registration before one calendar year has passed since the grade was given. The extension request must include a specific date by which all course work will be completed; this date will be the new expiration date for the I grade.

Regardless of any extensions that may have been granted, an unconverted I grade will expire on the date that grades are due in a semester where the student has applied for graduation. Once an I expires, it will be administratively converted to an F on a date to be set by the Registrar.

V. IN PROGRESS GRADE (IP)

The In Progress (IP) grade is distinct and different from the Incomplete (I) grade. An 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 (NC). The IP grade is not calculated into the grade point average. In most cases upon the completion of the required work, the instructor will assign a grade of CR. An IP that has not been converted to a grade by the date that grades are due in a semester where the student has applied for graduation will be administratively converted to NC on a date to be set by the Registrar.

VI. REPEATED GRADES

If a student repeats a course for credit, only the last occurrence of the course shall be counted toward credit hours or cumulative grade points, except in circumstances of academic integrity. The earlier grade will remain on the transcript with an "E" indicating exclusion from the grade point average. If there have been any changes in course numbers or titles, the student must obtain approval from the chairperson of the department offering the course to be assured it is an identical course. Once a degree has been awarded, a course included in that degree may not be repeated for credit.

VII. CHANGING GRADES

The course instructor has the responsibility for assigning grades. In the event that an instructor cannot issue a grade, the chair of the department offering the course may issue the grade, using whatever evidence is available.

Grades must be submitted to the Registrar by the date assigned in the academic calendar. If the grade has not been entered by this deadline, the symbol MG (missing grade) shall be entered. Missing grades should be changed to a final grade no later than three business days prior to the first day of classes in the subsequent academic term.

Grades may be changed through the Grade Appeal process, through the conversion of an Incomplete to a grade, through the conversion of an IP to a grade, and through the Grade Change Process.

Grade Change Process: Under some circumstances not covered by an Incomplete or In Progress, a grade may be changed by the course instructor through submission of a grade change request. The request must be reviewed by the chair of the department offering the course.

VIII. REPORTING GRADES

The schedule and method of reporting grades to the student are determined by the Registrar's Office. Students in debt to the university will not receive a semester grade report or transcript until the debt is satisfied.

IX. APPEALING GRADES

The formal process to appeal a final grade decision is described on the UA Little Rock policy website at https://ualr.edu/policy/home/student/grade-appeals/.

PRIOR LEARNING ASSESSMENT

At UA Little Rock, we value the life experiences of our students, and are committed to helping working and adult learners achieve their higher education goals. We are proud to offer pathways for certain experiences to be counted toward graduation requirements through Prior Learning Assessment (PLA). PLA is the evaluation and assessment of an individual's life learning for college credit, certification, or advanced standing toward further education or training.

PRIOR LEARNING ASSESSMENT PROGRAMS AND POLICIES

UA Little Rock recognizes several methods for earning university credit for undergraduate and graduate level learning, including rigorous high school curricula, professional or military experience, professional licensures and certifications, and work experiences. In order to receive university credit, these competencies must undergo systematic evaluation against established program or course learning outcomes. * A student may earn a maximum of 50% of program degree requirements through PLA (excluding the General Education Core), however some academic programs may enforce a lower maximum for PLA credits. The PLA credit awarded for a specific program of study may not be recognized should the student change majors, programs, or transfer to another institution. Finally, PLA credit may not be awarded for project hours, thesis hours, dissertation hours, field research, or field professional experience hours. To be eligible for PLA, the student must be currently admitted and/or enrolled in the university and in good standing. All PLA credit must be awarded prior to the students' last semester before graduation. Prior learning credits will be noted on the student's transcript as having been awarded through PLA. Credit through PLA is not recorded as grades on the student's transcript and does not affect the student's GPA.

*Graduate programs will specify if they will accept PLA, what forms of PLA they will accept, and the maximum percentage or number of hours they will accept."

Further restrictions on PLA credit:

- Credit through PLA cannot replace a failing grade;

- Credit may only be awarded for courses applicable to the student's declared degree plan;

- A student may not receive credit twice for a course that has been awarded through PLA;

- PLA credits do not count toward the residency requirement for the student's degree program;

- PLA credits do not satisfy eligibility requirements for financial aid or loan deferment.

  For information on Graduate degree programs that consider PLA credit, please contact the Graduate School at gradschool@ualr.edu or by phone at 501-916-3206.

ACADEMIC CLEMENCY

UA Little Rock graduate students who have received low grades for one or more semesters of coursework may be eligible to apply for academic clemency. Academic clemency removes a limited number of grades and credits from a student's grade point average (GPA). In some cases, academic clemency can restore a student to good standing in cases where the student's GPA has fallen below a 3.0; it may preserve a student's eligibility for a graduate assistantship or enable a student to be removed from academic probation.

Clemency removes from the student's GPA all grades and credits earned during the semesters (i.e., spring, summer, fall) for which clemency is requested. The student's complete record will remain on the transcript with the added notation of academic clemency received.

Graduate students are eligible to apply for academic clemency if

- they were not dismissed from UA Little Rock for non-academic reasons

- they have not been enrolled at any higher education institution for at least 1 year

Students may apply by completing and submitting the Graduate Level Clemency Request form located at https://ualr.edu/gradschool/gradclemency/. Students may request clemency for up to two semesters of credit. The request will be forwarded to the student's program coordinator for approval. Upon approval, the coordinator shall forward the request to the Graduate School Dean. If more than two semesters of credit are needed to return the student to good academic standing, a special petition must be filed with the Graduate School.

Any petition for academic clemency must be requested and granted prior to the awarding of the degree. Once the degree is awarded, the record is closed and the academic clemency policy cannot be invoked. Academic clemency may be approved only once. For purposes of degree requirements, a student who receives clemency must follow the provisions of the Graduate Catalog in effect at the time of re-enrollment.

TRANSCRIPT POLICIES

UA Little Rock 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 UA Little Rock. Transcript requests must be made at least one week before the desired date of issue. A small fee is charged for each transcript issued. To submit a transcript request, visit https://ualr.edu/records/transcript-request/.". Transcripts presented for admission or evaluation of credit to UA Little Rock 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 UA Little Rock 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.

GRADUATE STUDENT RESPONSIBILITIES

Graduate students are responsible for all aspects of their academic progress and for being familiar with UA Little Rock'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 UA Little Rock 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 UA Little Rock 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 their advisor, advisory committee, and/or graduate program coordinator to ascertain clear expectations for degree or certificate completion.

AND RESEARCH INTEGRITY

Academic integrity is a cornerstone value of the Graduate School at UA Little Rock. Every UA Little Rock graduate student is expected to perform their academic, research, artistic, scholarly, and other creative activities in a fashion reflective of the highest standards of the university, their profession, and a functional civil society. Academic dishonest 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 UA Little Rock Academic Integrity and Grievance Policy (ualr.edu/policy/index.php/50113/).

UA Little Rock 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 UA Little Rock Academic Integrity and Grievance Policy (https://ualr.edu/deanofstudents/section-vii-administration/academic-integrity-grievance-policy/).

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 UA Little Rock 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 UA Little Rock 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 UA Little Rock Research Compliance Officer.

UA Little Rock'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 human subjects research, animal research, or biological research 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 UA Little Rock research compliance may be obtained from the UA Little Rock Research Compliance Office located on the fifth floor of the Ottenheimer Library. Contact the Research Compliance Officer at (501) 916-6207.

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 UA Little Rock 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 UA Little Rock Institutional Review Board (IRB) before they are initiated. Any project that involves vertebrate animals must have approval from the UA Little Rock 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 no longer requires bound copies of theses and dissertations; check with your individual program as they may have different requirements. However, the electronic submission of theses and dissertations to ProQuest is required. 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. (See UA Little Rock Dissertation and Thesis Guidelines for more information and fees.)

One typed, unbound copy of the completed and approved document must be delivered (either physically or via email) 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 a fully-correct electronic version. The electronic version submitted to ProQuest must be correct per Graduate School guidelines and approved by the chair of the defense committee.

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. Students should complete the graduation application in BOSS early in the semester they expect to graduate; check the academic calendar for the deadline to apply each semester. Timely submission of the graduation application is essential. Failure to apply to graduate by the published deadline will result in the degree being awarded the following semester.

COMMENCEMENT

Commencement ceremonies are conducted twice a year at the end of fall and spring semesters. Students graduating in the fall or spring should participate in the ceremony that takes place the semester they complete their degree requirements. Students who will graduate during the summer are welcome to participate in spring commencement, but their 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 participate in commencement. Caps and gowns may be ordered through the UA Little Rock Barnes and Noble Bookstore.

ACADEMIC HONORS

ALPHA EPSILON LAMBDA

UA Little Rock 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.

COURSE ATTENDANCE

All graduate students at UA Little Rock are expected to attend class regularly. Each faculty member has the right to establish requirements for attendance and participation unique to each of their 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 their 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 that can be found on the Office of Records and Registration website. 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 UA Little Rock 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 UA Little Rock 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 UA Little Rock Student Handbook.

STUDENT CONDUCT

Graduate students neither lose the rights nor escape the responsibilities of citizenship through enrollment at UA Little Rock. 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 UA Little Rock 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 UA Little Rock 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.

For more information about the Grade Appeals policy, view Grade Appeals -- 501.6.

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 UA Little Rock Graduate School requires a baccalaureate degree from a regionally accredited institution with substantially the same undergraduate program as at UA Little Rock (typically at least 120 hours or the equivalent of a 4-year baccalaureate degree). 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 UA Little Rock 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
Suite 527
2801 South University Avenue
Little Rock, Arkansas 72204-1099

A non-refundable application fee of $40.00 is required of all applicants except for McNair Scholars and military members. In addition, all applicants, except for those in solely UA Little Rock Online programs, must submit 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 UA Little Rock 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 UA Little Rock. 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.

REAPPLICATION

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. 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 DUAL CREDIT PROGRAMS

Early Entry Programs
Exceptional UA Little Rock undergraduate students may apply be accepted to select graduate programs and begin working toward their graduate degree/certificate while completing their baccalaureate degree. The 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

UA Little Rock undergraduate students may take up to six hours of graduate-level courses and reserve the credit for their graduate degree. Unlike the early entry 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 UA Little Rock 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.

- The UA Little Rock Graduate School recommends the usage of WES for articulated transcripts. However, as of fall 2016, any current member of the National Association of Credential Evaluation Services (NACES) may be used.

- 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 UA Little Rock 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 UA Little Rock 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 UA Little Rock 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, UA Little Rock 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 UA Little Rock 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:** UA Little Rock 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

A student may be granted admission to the Graduate School in one of the following categories:

REGULAR

Regular admission to a UA Little Rock graduate program requires that the applicant be in good standing with all previous institutions and meet at least one of the following requirements:

- A baccalaureate degree with a cumulative GPA of 2.7/4.0 from a regionally accredited, domestic institution or an international institution recognized by the International Association of Universities with substantially the same undergraduate program as found at UA Little Rock

- A baccalaureate degree with a GPA of 3.0/4.0 in the last 60 hours from a regionally accredited, domestic institution or an international institution recognized by the International Association of Universities with substantially the same undergraduate program as found at UA Little Rock

- An advanced degree (master's or doctoral) with a cumulative GPA of 3.0/4.0 from a regionally accredited, domestic institution or an international institution recognized by the International Association of Universities.

International students should refer to the Graduate School International Student Admissions Policy for additional required application materials.

In addition to the minimum requirements stipulated above, students must satisfy the requirements for the program to which they are applying in order to be granted regular status. Students should consult the Graduate Catalog for program specific admission requirements. Some degree programs require that scores from standardized tests, such as the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Graduate Management Admission Test (GMAT), be submitted as part of the application portfolio. Generally, scores more than five years old are not accepted. Test scores alone do not determine

admission to a program, but are one piece of data used in the consideration process. 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.

Students must complete all admission forms to be considered for regular admission.

CONDITIONAL

Conditional admission to a UA Little Rock graduate program requires that the applicant must have supplied all admission materials but did not meet all the regular admission requirements.

Additional requirements will be used, such as, test scores, grades in the undergraduate major, or other pertinent data must indicate the student will perform satisfactorily in graduate school, to determine conditional admission. Please refer to the specific program admission requirements see what is required for conditional admission review.

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 CONDITIONAL

Students who have supplied all admission materials and did not meet all admission requirements may be admitted as conditional students. Applicants with an undergraduate cumulative GPA between 2.0 and 2.7 or a GPA between 2.7 and 3.0 in their last 60 hours may, in rare instances, be admitted conditionally if they meet alternative program requirements approved by the Graduate Council. The number of students that may be admitted without meeting the Graduate School's minimum GPA requirements is limited to 10% of the official 3-year average program enrollment. Programs may petition the Graduate School for an exception to this limit.

Test scores, grades in the undergraduate major, or other pertinent data approved for the program must indicate the student will perform satisfactorily in graduate school.

The student may be converted to regular status after completing 9 hours if he or she maintains a GPA of 3.0 or higher. The student will be dismissed after 9 hours if his or her GPA is not at least 3.0 or satisfactory progress is not made toward meeting the admission requirements.

SPECIAL

Students not seeking a degree at UA Little Rock who have completed all admission forms and have an undergraduate grade point average of at least 2.7 (2.0 for conditional admission) may be admitted as special, non-degree-seeking students. Enrollment of special students is prohibited by some programs. Some programs allow special students to enroll in a limited number of courses. Persons interested in this category should consult the academic program advisor or the Graduate School.

TRANSIENT

Students enrolled in another accredited graduate school and who secure a letter of good standing from the dean of that graduate school may be admitted to UA Little Rock as transient students

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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.

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.

WHAT'S NEW: GRADUATE CURRICULUM UPDATES FOR 2021-2022 CATALOG

COURSE/PROGRAM	CHANGE MADE
APPLIED MATHEMATICS, M.S.	Narrative change. Rearranged concentrations
ACADEMIC POLICIES AND PROCEDURES	Edited page narrative
APPLIED COMMUNICATION STUDIES, M.A.	Narrative changes to the program requirements
APPLIED SCIENCE M.S.	Coursework narrative & College name updated
APPLIED SCIENCE, APPLIED BIOSCIENCES EMPHASIS, PH.D.	Narrative changes to the Advisor & Advisory committee sections of the page
APPLIED SCIENCE, APPLIED CHEMISTRY EMPHASIS, PH..	Narrative changes to the Advisor & Advisory committee sections of the page
APPLIED SCIENCE, APPLIED MATHEMATICS AND STATISTICS, PH.D.	Narrative changes to the Advisor & Advisory committee sections of the page
APPLIED SCIENCE, APPLIED PHYSICS EMPHASIS, PH.D.	Narrative changes to the Advisor & Advisory committee sections of the page
BIOINFORMATICS, PH.D.	Change to Narrative.
BUSINESS ADMINISTRATION, M.B.A.	Removed BSAD 7100 requirement from catalog, Edited PharmD/MBA narrative
BUSINESS AND PROFESSIONAL WRITING GRADUATE CERTIFICATE	Edited Narrative
COLLEGE OF BUSINESS, HEALTH, AND HUMAN SERVICES	Updated Office Phone Number, Page narrative changed, Description of College changed, Change made to College of Business accreditation section
CONSTRUCTION MANAGEMENT & CIVIL AND CONSTRUCTION ENGINEERING	Requested to delete Construction Mgt Programs, GC & Estimating Mgt GC
COUNSELING, COUNSELOR EDUCATION TRACK, M.A.	Added New Course - COUN 7380 - Human Development for Counseling. COUN 7366 - Applied Counseling Research, edited electives adjusted curriculum
COUNSELING, M.A.	New Program Tracks, added new courses including CNSL 7640. COUN 7366. COUN 7380, COUN 7305, COUN 7304. Renamed some courses and deleted others.
EDUCATION, MIDDLE EDUCATION CONCENTRATION, M.ED.	TCED 7301 Curriculum/Pedag/Practice added, MCED 7319 Internship added, TCED 7600 removed
ENGINEERING SCIENCE AND SYSTEMS, ELECTRICAL AND COMPUTER ENGINEERING TRACK, PH.D.	College name updated in narrative
ENGINEERING SCIENCE AND SYSTEMS, MECHANICAL AND MATERIALS ENGINEERING TRACK, PH.D.	College name updated in narrative
ENGINEERING SCIENCE AND SYSTEMS, SYSTEMS ENGINEERING TRACK, PH.D.	College name updated in narrative
ENGINEERING SCIENCE AND SYSTEMS, TELECOMMUNICATIONS AND NETWORKING ENGINEERING TRACK, PH.D.	College name updated in narrative
GC APPLIED STATISTICS	Narrative change made
GUIDE TO THE UA LITTLE ROCK, GRADUATE SCHOOL	Edited page narrative
INFORMATION SCIENCE, M.S.	Change admission requirements
M.ED. IN GIFTED, CREATIVE, AND TALENTED EDUCATION K-12	Change to Narrative

M.S. SPORT MANAGEMENT	Removed HHPS 7332 Planning & Management of Facilities and HHPS 7335 Event Development & Management
MASTER OF SCIENCE IN BUSINESS INFORMATION SYSTEMS AND ANALYTICS	Early Entry Admission narrative changes made
PROFESSIONAL AND TECHNICAL WRITING, EDITING CONCENTRATION, M. A.	Change to program description
PROFESSIONAL AND TECHNICAL WRITING, NONFICTION CONCENTRATION, M. A.	Change to program description
PROFESSIONAL AND TECHNICAL WRITING, TECHNICAL WRITING CONCENTRATION, M. A.	Change to program description
PUBLIC HISTORY, M.A.	Remove HIST 4390 and HIST 4393. Added HIST 5393. Made description Narrative changes
REHABILITATION OF THE BLIND ORIENTATION & MOBILITY, M.A.	Change to curriculum made
SCHOOL FOR CRIMINAL JUSTICE AND CRIMINOLOGY	Changed School of Criminal Justice to School of Criminal Justice and Criminology
SOCIAL WORK, M.S.W.	Page narrative updated

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.

Master of Arts

- Applied Communication Studies, M.A.
- Art, Art History Track, M.A.
- Art, Visual Arts Track, M.A.
- Biology, M.A.
- Chemistry, M.A.
- Counseling, Counselor Education Track, M.A.
- Counseling, M.A.
- Criminal Justice, M.A.
- Mass Communication, M.A.
- Professional and Technical Writing, Editing Concentration, M.A.
- Professional and Technical Writing, Nonfiction Writing Concentration, M.A.
- Professional and Technical Writing, Technical Writing Concentration, M.A.
- Public History, M.A.
- Rehabilitation of the Blind Orientation & Mobility, M.A.

Master of Business Administration

- Business Administration, Business Analytics Concentration, M.B.A.
- Business Administration, Financial Accounting Analysis, M.B.A.
- Business Administration, Human Resource Management Concentration, M.B.A.
- Business Administration, M.B.A.
- Business Administration, Organizational Communication Concentration, M.B.A.

Master of Education

- Curriculum and Instruction, M.Ed.
- Education, K-12 Education Concentration, M.Ed.
- Education, Middle Education Concentration, M.Ed.
- Education, Provisional Initial Licensure Track, M.Ed.
- Education, Special Education K-12 Concentration, M.Ed.
- Gifted, Creative, and Talented Education, M.Ed.
- Learning Systems Technology, M.Ed.
- Reading, M.Ed.

Master of Public Administration

- Public Administration, M.P.A.

Master of Public Service

- Public Service, M.P.S.

Master of Science

- Applied Science, Non-Thesis Option Alternative 1, M.S.
- Applied Science, Non-Thesis Option Alternative 2, M.S.
- Applied Science, Non-Thesis Option Alternative 3, M.S.
- Applied Science, Thesis Option, M.S.
- Bioinformatics, M.S.
- Biology, M.S.
- Business Information Systems and Analytics, M.S.
- Chemistry, M.S.
- Computer Science, M.S.
- Criminal Justice, M.S.
- Electrical and Computer Engineering, M.S.
- Health Education and Promotion, M.S.
- Information Quality, M.S.
- Information Science, M.S.
- Mathematical Sciences, Applied Mathematics, M.S.
- Mathematical Sciences, Applied Statistics, M.S.
- Mathematical Sciences, Collegiate Mathematics Education, M.S.
- Mechanical Engineering, M.S.
- Sport Management, M.S.

Master of Social Work

- Social Work, M.S.W.

Doctor of Philosophy

- Applied Science, Applied Biosciences Emphasis, Ph.D.
- Applied Science, Applied Chemistry Emphasis, Ph.D.
- Applied Science, Applied Mathematics and Statistics, Ph.D.
- Applied Science, Applied Physics Emphasis, Ph.D.
- Bioinformatics, Ph.D.
- Computer and Information Sciences, All Tracks, Ph.D.
- Computer and Information Sciences, Computer Science Track, Ph.D.
- Computer and Information Sciences, Information Quality Track, Ph.D.
- Computer and Information Sciences, Information Science Track, Ph.D.
- Criminal Justice, Ph.D.
- Engineering Science and Systems, Electrical and Computer Engineering Track, Ph.D.
- Engineering Science and Systems, Mechanical and Materials Engineering Track, Ph.D.
- Engineering Science and Systems, Systems Engineering Track, Ph.D.
- Engineering Science and Systems, Telecommunications and Networking Engineering Track, Ph.D.
- Reading, Ph.D.

Graduate Certificate

- Applied Statistics Graduate Certificate
- Business Analytics Graduate Certificate
- Business and Professional Writing Graduate Certificate
- Business Graduate Certificate
- Business Information Systems Graduate Certificate
- Conflict Mediation Graduate Certificate
- Data Science Graduate Certificate
- Dyslexia Therapist Graduate Certificate

- Education Graduate Certificate
- Financial Accounting Analysis Graduate Certificate
- Gerontology Graduate Certificate
- Gifted and Talented Education Graduate Certificate
- Human Resources and Organizational Communication Graduate Certificate
- Information Quality Graduate Certificate
- Learning Systems Technology Education Graduate Certificate
- Literacy Coach Specialist Graduate Certificate
- Nonprofit Management Graduate Certificate
- Online Writing Instruction Graduate Certificate
- Orientation and Mobility of the Blind Graduate Certificate
- Special Education K-12 Graduate Certificate

Online Graduate Program

501.569.3003 | Phone: 1.877.270.7838 (toll-free) | Email: online@ualr.edu
With many degree and certificates courses available totally online, the University of Arkansas at Little Rock offers you the flexibility to balance family, work and school responsibilities on your own schedule.

Students declared in an approved UA Little Rock Online degree or certificate program receive the benefits of reduced, standard tuition rates and full access to UA Little Rock's academic resources.

ONLINE GRADUATE CERTIFICATES

- Data Science Graduate Certificate
- Dyslexia Therapist Graduate Certificate
- Gerontology Graduate Certificate

- Gifted and Talented Education K-12 Graduate Certificate
- Information Quality Graduate Certificate
- Learning Systems Technology Education Graduate Certificate
- Online Writing Instruction Graduate Certificate

ONLINE GRADUATE DEGREES

- Computer and Information Sciences, Ph.D.
- Mass Communication, M.A
- Professional and Technical Writing, M.A
- Gifted, Creative, and Talented Education K-12, M.Ed.
- Learning Systems Technology Education, M.Ed.
- Reading, M.Ed.
- Criminal Justice, M.S.
- Information Quality, M.S.
- Information Science, M.S.
- Social Work, M.S.W

You can find the latest program offerings and additional information at ualr.edu/online/programs.

SYSTEM REQUIREMENTS

Technical requirements include:

- A computer with an up-to-date operating system and processor, as well as sufficient storage and memory capacity
- A stable, broadband Internet connection

- An updated Internet browser
- Microsoft Office or OpenOffice
- Java and Macromedia Flash Player
Read more about the system requirements at our Blackboard Student Support Website

Students taking online courses should have regular, reliable access to and control of a computer as your assignment dates may vary. Some courses may also require additional equipment or software. Check with your instructors and course syllabi to determine specific requirements for your online courses.

ONLINE ACADEMIC RESOURCES

Students who take courses online have full access to the university's academic resources, including the Ottenheimer Library, University Writing Center, and the Mathematics Assistance Center. For additional resources please visit our FAQs and our Student Success Blog.

For more information about fully online degree programs, please visit UA Little Rock Online. To learn more about other online offerings at UA Little Rock, please visit the eLearning website.

College of Humanities, Arts, Social Sciences, and Education

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

- Professor Sarah Beth Estes, Dean

- Professor Johanna Miller Lewis, Associate Dean

By melding the classic arts and letters disciplines with science programs, the College of Humanities, Arts, Social Sciences, and Education is the academic centerpiece of the campus.

Department of History

Master of Arts
Public History, M.A.

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 the completion of specific preparatory classes).

- Two letters of recommendation, preferably from persons familiar with applicant's academic work or related work experience, sent to the History Department's Graduate Coordinator.

- Statement of Purpose: In an essay of 750-1,000 words, explain why you want to pursue the MA in public history and how this degree will advance your career or intellectual interests. Consider including your choice of one of our academic tracks: archival studies, museum studies, or historic preservation. (NOTE: This is not simply an autobiographical statement.)

- One of the following:

- Graduate Record Examination scores of at least 152 on the verbal section and at least 142 on the quantitative section, or scores of at least 152 on the verbal section and 3.5 on the writing section.

- Writing sample: Submit a writing sample, preferably an academic paper of approximately 2,500 words. The writing sample must include a title page with the following information: applicant's name, original date of submission, and a brief explanation (2-3 sentences) of why you chose to submit the essay.

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 HIST 7311, HIST 7315, HIST 7391, HIST 7398, HIST 7399, or HIST 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

- HIST 7311 - Introduction to Public History
- HIST 7315 - Seminar in Historical Methods
- HIST 7391 - Seminar in Public History
- HIST 7398 - Internship
- HIST 7399 - Thesis Seminar
- HIST 7699 - Thesis

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 World 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 - History Museum Interpretation

Historic Preservation

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

General

- HIST 5306 - History with Objects I
- 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 G

Department of Rhetoric & Writing

Master of Arts

Professional and Technical Writing, Editing Concentration, M.A.

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 three concentrations: technical writing, nonfiction, and editing. 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 editing concentration focuses on processes of editing digital and written text and working with authors to prepare their content for publication.

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

All applicants to the MA program in Professional and Technical Writing must have a baccalaureate degree from a regionally or internationally accredited institution. The program accepts applicants from a wide range of disciplines; a prior degree in writing is not required.

Applicants must submit to the Graduate School all of the application materials described on the Graduate School website, including transcripts from previous institutions. In addition, all applicants must submit the following documents directly to the Professional and Technical Writing graduate coordinator:

- A statement of purpose

- A current resume

- 3-4 writing samples

- A cover piece introducing and providing context for the writing samples

Applicants should also arrange for three letters of recommendation to be sent directly from their recommenders to the program's graduate coordinator.

Prospective students are strongly urged to contact the graduate coordinator before completing the application process.

REGULAR ADMISSION

Applicants will be considered for regular admissions if they have achieved a cumulative GPA of 3.0 or better on a previous baccalaureate or graduate degree, or if they have achieved a GPA of 3.0 or better on their last 60 hours of coursework. The

quality of the applicant's writing- including the statement of purpose, writing samples, and cover piece- is a major factor in the admissions decision, along with the applicant's references.

Students must have regular admission status in order to be eligible for teaching, research, or administrative assistantship positions.

CONDITIONAL ADMISSION

Applicants will be considered for conditional admission if they have achieved a cumulative GPA between 2.7 and 3.0 on a previous baccalaureate or graduate degree, or if they have achieved a GPA between 2.7 and 3.0 on their last 60 hours of coursework. The quality of the applicant's writing- including the statement of purpose, writing samples, and cover piece- is a major factor in the admissions decision, along with the applicant's references. Some applicants with GPAs higher than 3.0 may be conditionally admitted based on the admission committee's evaluation of the writing samples and references.

Conditionally admitted students must maintain a GPA of 3.0 in their first 9 hours of coursework in order to remain in the program. Conditionally admitted students may also be subject to other conditions for enrollment, such as required courses in the first 9 hours of study specified by the admission committee. Conditionally admitted students completing their MA coursework with a GPA of 3.0 or higher after their first 9 credit hours will become regularly admitted students.

SPECIAL CONDITIONAL ADMISSION

Applicants with a GPA between 2.0 and 2.69 who demonstrate extraordinary potential for achievement may petition the MA admission committee for special consideration.

Applicants must discuss and provide evidence regarding two or more of the following criteria as part of their petition:

- GPA in previous writing courses
- Amount of time elapsed since the previous degree (5+ years recommended)
- Professional experience in writing, teaching, or editing
- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study
- Extraordinary circumstances related to the low overall GPA

Applicants whose petitions are approved by the admission committee will be subject to the same requirements and restrictions as listed above for conditionally admitted students.

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 Internship/Practicum. 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 choose 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.

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.

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.

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 - Introduction to Research Methods

- RHET 7311 - Rhetorical Theory

Choose one:

- RHET 7310 - Composition Theory

- RHET 7312 - Language Theory

- RHET 7313 - Theory of Technical Communication

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, RHET 7261, and/or RHET 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

Editing Concentration Courses

- RHET 5304 - Technical Style and Editing

- RHET 5321 - Editing for Publication

- RHET 5322 - Advanced Editing

- RHET 5323 - Production for Editors

- RHET 5324 - Publishing Inside Out

- RHET 7161 - Editing Internship

- RHET 7261 - Editing Internship

- RHET 7361 - Editing Internship

Professional and Technical Writing, Nonfiction Writing Concentration, M.A.

Professional and Technical Writing

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Students must have regular admission status in order to be eligible for teaching, research, or administrative assistantship positions.

CONDITIONAL ADMISSION

Applicants will be considered for conditional admission if they have achieved a cumulative GPA between 2.7 and 3.0 on a previous baccalaureate or graduate degree, or if they have achieved a GPA between 2.7 and 3.0 on their last 60 hours of coursework. The quality of the applicant's writing- including the statement of purpose, writing samples, and cover piece- is a major factor in the admissions decision, along with the applicant's references. Some applicants with GPAs higher than 3.0 may be conditionally admitted based on the admission committee's evaluation of the writing samples and references.

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- GPA in previous writing courses

- Amount of time elapsed since the previous degree (5+ years recommended)

- Professional experience in writing, teaching, or editing

- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Extraordinary circumstances related to the low overall GPA

Applicants whose petitions are approved by the admission committee will be subject to the same requirements and restrictions as listed above for conditionally admitted students.

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 Internship/Practicum. 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 choose 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.

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.

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.

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 - Introduction to Research Methods
- RHET 7311 - Rhetorical Theory

Choose One
- RHET 7310 - Composition Theory
- RHET 7312 - Language Theory
- RHET 7313 - Theory of Technical Communication

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, RHET 7261, and/or RHET 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

Nonfiction Writing Concentration Courses

- RHET 5202 - Teaching Writing in Secondary Schools
- RHET 5301 - Theories of Rhetoric and Writing
- RHET 5305 - Document Design
- RHET 5315 - Advanced Persuasive Writing

- RHET 5317 - The Personal Essay
- RHET 5318 - Memoir
- RHET 5321 - Editing for Publication
- RHET 5325 - Legal Writing, Reasoning, and Argument
- RHET 5326 - Technology of the Book
- RHET 5345 - Topics in Persuasive Writing
- RHET 5347 - Topics in Nonfiction Writing
- RHET 7300 - Introduction to Research Methods
- RHET 7320 - Working with Writers
- RHET 7330 - Topics in Nonfiction Writing
- RHET 7331 - Topics in the Essay
- RHET 7332 - Topics in Extended Nonfiction
- RHET 7335 - Topics in Rhetoric
- RHET 7350 - Independent Study
- RHET 7360 - Internship/Practicum
- RHET 7371 - Intro to Online Writing Instruction
- RHET 7372 - Multimedia in Online Writing Instruction

Professional and Technical Writing, Technical Writing Concentration, M.A.

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 three concentrations: technical writing, nonfiction, and editing. 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 editing concentration focuses on processes of editing digital and written text and working with authors to prepare their content for publication.

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

All applicants to the MA program in Professional and Technical Writing must have a baccalaureate degree from a regionally or internationally accredited institution. The program accepts applicants from a wide range of disciplines; a prior degree in writing is not required.

Applicants must submit to the Graduate School all of the application materials described on the Graduate School website, including transcripts from previous institutions. In addition, all applicants must submit the following documents directly to the Professional and Technical Writing graduate coordinator:

- A statement of purpose

- A current resume

- 3-4 writing samples

- A cover piece introducing and providing context for the writing samples

Applicants should also arrange for three letters of recommendation to be sent directly from their recommenders to the program's graduate coordinator.

Prospective students are strongly urged to contact the graduate coordinator before completing the application process.

REGULAR ADMISSION

Applicants will be considered for regular admissions if they have achieved a cumulative GPA of 3.0 or better on a previous baccalaureate or graduate degree, or if they have achieved a GPA of 3.0 or better on their last 60 hours of coursework. The quality of the applicant's writing- including the statement of purpose, writing samples, and cover piece- is a major factor in the admissions decision, along with the applicant's references.

Students must have regular admission status in order to be eligible for teaching, research, or administrative assistantship positions.

CONDITIONAL ADMISSION

Applicants will be considered for conditional admission if they have achieved a cumulative GPA between 2.7 and 3.0 on a previous baccalaureate or graduate degree, or if they have achieved a GPA between 2.7 and 3.0 on their last 60 hours of coursework. The quality of the applicant's writing- including the statement of purpose, writing samples, and cover piece- is a major factor in the admissions decision, along with the applicant's references. Some applicants with GPAs higher than 3.0 may be conditionally admitted based on the admission committee's evaluation of the writing samples and references.

Conditionally admitted students must maintain a GPA of 3.0 in their first 9 hours of coursework in order to remain in the program. Conditionally admitted students may also be subject to other conditions for enrollment, such as required courses in

the first 9 hours of study specified by the admission committee. Conditionally admitted students completing their MA coursework with a GPA of 3.0 or higher after their first 9 credit hours will become regularly admitted students.

SPECIAL CONDITIONAL ADMISSION

Applicants with a GPA between 2.0 and 2.69 who demonstrate extraordinary potential for achievement may petition the MA admission committee for special consideration.

Applicants must discuss and provide evidence regarding two or more of the following criteria as part of their petition:

- GPA in previous writing courses

- Amount of time elapsed since the previous degree (5+ years recommended)

- Professional experience in writing, teaching, or editing

- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Extraordinary circumstances related to the low overall GPA

Applicants whose petitions are approved by the admission committee will be subject to the same requirements and restrictions as listed above for conditionally admitted students.

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 Internship/Practicum. 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 choose 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.

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.

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.

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 - Introduction to Research Methods
- RHET 7311 - Rhetorical Theory

Choose one:

- RHET 7310 - Composition Theory
- RHET 7312 - Language Theory
- RHET 7313 - Theory of Technical Communication

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, RHET 7261, and/or RHET 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

Technical Writing Concentration Courses

- RHET 5304 - Technical Style and Editing

- RHET 5305 - Document Design

- RHET 5306 - Writing for Business and Government

- RHET 5307 - Writing Software Documentation

- RHET 5346 - Topics in Technical Communication

- RHET 5371 - Writing on the Web

- RHET 5372 - Usability Testing and Design

- RHET 5375 - Grant Writing

- RHET 7320 - Working with Writers

- RHET 7340 - Topics in Technical, Business, and Government Writing

- RHET 7350 - Independent Study

- RHET 7360 - Internship/Practicum

Business and Professional Writing Graduate Certificate

The Graduate Certificate in Business and Professional Writing is 12 graduate hours. The certificate is designed to improve written communication skills required in current business settings, especially as related to marketing in social media. The graduate certificate can be added onto the MBA program in the College of Business or taken as an independent program. Students interested in this program should contact the Graduate Coordinator in the Department of Rhetoric and Writing at 501.569.3160.

ADMISSION REQUIREMENTS

- Admission to the MBA program in the College of Business,
- Or, one of the following criteria:
- Overall undergraduate GPA of 3.0 or higher (based on a 4.0 scale),
- Undergraduate GPA in the last 60 hours of 3.0 or higher,
- Undergraduate GPA in the last 30 hours of 3.2 or higher,
- Graduate GPA of 3.0 or higher for at least 15 hours of course credit.

Online Writing Instruction Graduate Certificate

The graduate certificate in Online Writing Instruction (OWI) is a 18-credit certificate program. The certificate prepares new or experienced or writing instructors to design and facilitate online writing courses that implement effective practices for online writing instruction. The program is aligned to the Conference on College Composition and Communication's Position Statement of Principles and Example Effective Practices for Online Writing Instruction.

ADMISSION REQUIREMENTS

Students currently in the M.A. in Professional and Technical Writing or the M.A. in Interdisciplinary Studies with a concentration in Professional and Technical Writing can automatically be admitted to the graduate certificate in OWI by sending an email to the graduate coordinator.

Courses taken for the graduate certificate may be used as electives in the MBA program with approval of the MBA program coordinator.

PROGRAM REQUIREMENTS

This graduate certificate requires 12 hours of graduate courses in the Department of Rhetoric and Writing.

Required Course (3 hours)

- RHET 5306 - Writing for Business and Government

Elective Courses (9 hours)

- RHET 5304 - Technical Style and Editing
- RHET 5305 - Document Design
- RHET 5307 - Writing Software Documentation
- RHET 5325 - Legal Writing, Reasoning, and Argument
- RHET 5345 - Topics in Persuasive Writing
- RHET 5346 - Topics in Technical Communication
- RHET 5371 - Writing on the Web
- RHET 5372 - Usability Testing and Design
- RHET 5375 - Grant Writing
- RHET 7311 - Rhetorical Theory
- RHET 7313 - Theory of Technical Communication
- RHET 7320 - Working with Writers

Department of Art and Design

Master of Arts

Art, Art History Track, M.A.

Master of Arts in Art

The Master of Arts in Art program offers two concentrations: art history, and visual art. For detailed information about the programs, visit the M.A. in Art website. The program is housed in the Department of Art and Design, 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.

Visual art offers concentration areas in intermedia, drawing, painting, printmaking, sculpture, ceramics, furniture design & woodworking, metalsmithing & jewelry, graphic design, illustration, or photography. Students from a wide range of creative backgrounds will be given the opportunity to study the materials and techniques that lead to their unique artistic expression. Working together, students will participate in peer review throughout the program and develop a cohort that will strengthen their artwork, creative practice, and professional network.

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 and Design.

ADMISSION REQUIREMENTS ARE AS FOLLOWS:

- Baccalaureate degree from an accredited institution with a cumulative GPA of 3.0 (4.0 scale). A B.A. or B.F.A. in art is preferable but other experiences will be considered.

- 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.

VISUAL ART ADDITIONAL REQUIREMENTS:

- Digital Portfolio of 20 high-quality images (detailing a minimum of 10 artworks) with the majority of the works in the medium of concentration.

- 24 undergraduate art hours, including 9 in art history are preferable but other experiences will be considered.

  *To be considered for admittance, the portfolio must show proficient skills indicating the ability to conduct self-directed work in the intended area of focus. The applicant may choose to include work from additional mediums. The portfolio should be of an overall high quality in every medium shown.

  **Admittance requires 9 hours of art history. Students that do not have the prerequisite hours will be required to complete these prior to enrolling in the seminar. Remedial hours cannot be counted as credit hours toward the M.A. degree.

CONDITIONAL ADMISSION REQUIREMENTS FOR THE M.A. IN ART/VISUAL ART

Applicants with a GPA between 2.7 and 2.9 may petition the M.A. admission committee for conditional admission. Applicants with a GPA between 2.0 and 2.6 may petition the M.A. admission committee for special consideration. Applicants must discuss ad provide evidence regarding two or more of the following criteria as part of their petition:

- GPA in previous art courses

- Amount of time elapsed since the previous degree (5+ years recommended)

- Professional experience in studio art

- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Explanation of special circumstances related to low GPA

Conditionally admitted students must maintain a GPA or 3.0 in their first 9 hours of coursework in order to remain in the program. Conditionally admitted students may also be subject to other conditions for enrollment, such as required courses in the first nine hours of study specified by the admission committee. Conditionally admitted students completing their MA coursework with a GPA 3.0 or higher after their first nine credit hours will become regularly admitted students.

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 - Italian Renaissance Art

  or

- ARHA 5306 - Renaissance Art in Northern Europe

  or

- ARHA 5384 - Baroque Art

  or

- ARHA 7315 - Seminar in Italian Renaissance and Baroque Art

  or

- ARHA 7316 - Seminar in Northern European Renaissance and Baroque Art
- ARHA 5307 - 18th- and 19th-Century European Art

  or

- ARHA 7327 - Seminar in 19th-Century Art

- ARHA 5308 - Art Since 1945

  or

- ARHA 5387 - Late 19th-and Early 20th-Century Art

  or

- ARHA 7328 - Seminar in 20th-Century Art
- 9 additional art history hours
- 6 elective hours (art history, studio art, or other approved)
- ARHA 7399 - Thesis

Art, Visual Arts Track, M.A.

Master of Arts in Art

The Master of Arts in Art program offers two concentrations: art history, and visual art. For detailed information about the programs, visit the M.A. in Art website. The program is housed in the Department of Art and Design, 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.

Visual art offers concentration areas in intermedia, drawing, painting, printmaking, sculpture, ceramics, furniture design & woodworking, metalsmithing & jewelry, graphic design, illustration, or photography. Students from a wide range of creative backgrounds will be given the opportunity to study the materials and techniques that lead to their unique artistic expression. Working together, students will participate in peer review throughout the program and develop a cohort that will strengthen their artwork, creative practice, and professional network.

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 and Design.

ADMISSION REQUIREMENTS ARE AS FOLLOWS:

- Baccalaureate degree from an accredited institution with a cumulative GPA of 3.0 (4.0 scale). A B.A. or B.F.A. in art is preferable but other experiences will be considered.

- 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.

VISUAL ART ADDITIONAL REQUIREMENTS:

- Digital Portfolio of 20 high-quality images (detailing a minimum of 10 artworks) with the majority of the works in the medium of concentration.

- 24 undergraduate art hours, including 9 in art history are preferable but other experiences will be considered.

*To be considered for admittance, the portfolio must show proficient skills indicating the ability to conduct self-directed work in the intended area of focus. The applicant may choose to include work from additional mediums. The portfolio should be of an overall high quality in every medium shown.

**Admittance requires 9 hours of art history. Students that do not have the prerequisite hours will be required to complete these prior to enrolling in the seminar. Remedial hours cannot be counted as credit hours toward the M.A. degree.

CONDITIONAL ADMISSION REQUIREMENTS FOR THE M.A. IN ART/VISUAL ART

Applicants with a GPA between 2.7 and 2.9 may petition the M.A. admission committee for conditional admission. Applicants with a GPA between 2.0 and 2.6 may petition the M.A. admission committee for special consideration. Applicants must discuss ad provide evidence regarding two or more of the following criteria as part of their petition:

- GPA in previous art courses

- Amount of time elapsed since the previous degree (5+ years recommended)

- Professional experience in studio art

- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Explanation of special circumstances related to low GPA

Conditionally admitted students must maintain a GPA or 3.0 in their first 9 hours of coursework in order to remain in the program. Conditionally admitted students may also be subject to other conditions for enrollment, such as required courses in the first nine hours of study specified by the admission committee. Conditionally admitted students completing their MA coursework with a GPA 3.0 or higher after their first nine credit hours will become regularly admitted students.

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.

Visual Art (VAR)

The visual art concentration is a 30-hour program that requires 12 hours of Graduate Studio; 3 hours or ARST 7357 30-Hour Project & Exhibition; 3 hours of approved studio electives; 6 hours of art history; 3 hours of ARED 7320 Art Education for the Professional Artist I or MGMT 5383 Issues in Entrepreneurship; or an appropriate substitution as determined by the graduate coordinator; and 3 hours of Integrative Practices.

Completion Sequence

Semester 1 - 10 Hours

- ARST 7171 - Integrative Practice I

- Graduate Art History/Creative Entrepreneurship/Art Education

- ARST 7311 - Graduate Studio I

- Approved Studio Elective

Semester 2 - 10 Hours

- ARST 7172 - Integrative Practice II

- Graduate Art History/Creative Entrepreneurship/Art Education

- ARST 7312 - Graduate Studio II

- ARST 7313 - Graduate Studio III

Semester 3 - 10 Hours

- ARST 7173 - Integrative Practice III

- ARST 7314 - Graduate Studio IV

- Graduate Art History/Creative Entrepreneurship/Art Education

- ARST 7357 - 30-Hour Project & Exhibition

Department of Applied Communication

Master of Arts

Applied Communication Studies, M.A.

*Gainful Employment

The mission of the Department of Applied 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.

We achieve this mission by having students complete class and final projects primarily focused on six communication applications:(a) communication and organizational culture analysis; (b) communication and transformation/change; (c) positive interpersonal communication; (d) conflict management; (e) crisis and renewal communication; and (f) experiential learning in presentations and trainings

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 applied communication is helpful but is not required.

INDIVIDUALIZED FOCUS AREA

The above six applications launch students into their areas of focus or emphasis. Elective courses, projects within required classes, and the final M.A. project involve students in tailoring their program to fit their goals. Students are encouraged to identify focus areas relevant to their career goals.

To support your career development, we will aid you in connecting with our diverse alumni network. You will find support for an array of emphasis areas: internal and external communication, public health, conflict mediation, business leadership and management, consulting, human resources, training, organization development, intercultural/diversity initiatives, non-profit leadership, relational communication, health care, education, and public relations.

As students enter the program, we identify ways to maximize coursework, including electives and the final project to fit their career goals. Review this sample course sequence to understand the flow of our unique blended program designed for working professionals. This sequence of courses is then adapted based on student goals.

Our program has built bridges with UAMS for those interested in health communication. In addition, students may concurrently enroll in and complete a Conflict Mediation Certificate. Furthermore, the UA Little Rock MBA program has identified a set of courses for those interested in this focus area.

We also offer a unique, concurrent 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 public health arena. Students participating in the concurrent programs earn an MA in Applied Communication Studies and an MA in Public Health.

Students with an interest in doctoral work gain a solid foundation in applied communication research and theory. These students benefit from the personal attention of faculty devoted to preparing them for the next step in their education. Alumni from our master's program now serve as professors at schools ranging from Purdue and Clemson to Kansas State and the Clinton School of Public Service.

Students interested in pursuing doctoral work may complete any of the above tracks toward an M.A. 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

APPLICATION MATERIALS:

SEND DIRECTLY TO UA LITTLE ROCK GRADUATE SCHOOL

- Official transcripts from ALL previously attended colleges and universities

- $40 application fee

- Copy of your government-issued photo ID

- Proof of 2 MMR vaccines. For more information on this requirement, visit Health Services' website.

SEND DIRECTLY TO APPLIED COMMUNICATION GRADUATE COORDINATOR:

- 300-500 words professional statement indicating your goals and fit with the program

- 2 faculty-approved writing samples from previous coursework or approved professional writing samples showing potential for graduate work. If academic or professional writing samples are not available, the graduate coordinator will provide writing prompts to guide in developing samples.

- A list of 3 academic and/or professional references with contact information (**do not have letters sent**)

- Resume or curriculum vitae

IMPORTANT FACTS ABOUT THE APPLICATION PROCESS

- International students should refer to the Graduate School International Student Admission Policy for additional required application materials.

- Applicants are reviewed and offered admission based on qualifications for admission in light of the number of available slots in the program. In some cases, admission may need to be deferred until slots are available.

- Admissions criteria are based on two categories: regular and special conditional admission, as outlined below.

ADMISSION CRITERIA:

REGULAR ADMISSION

Applicants seeking regular admission must meet one of the following requirements:

- A baccalaureate degree with a cumulative GPA of 2.7 on a 4.0 scale from a regionally accredited domestic institution or an international institution recognized by the International Association of Universities with substantially the same undergraduate program as found at UA Little Rock

- A baccalaureate degree with GPA of 3.0 on a 4.0 scale in the last 60 undergraduate hours (including post-baccalaureate hours)

- An advanced degree (master's or doctoral) with a cumulative GPA of 3.0 on a 4.0 scale from a regionally accredited domestic institution or an international institution recognized by the International Association of Universities.

APPLICANTS MUST ALSO FULFILL THE FOLLOWING:

- Writing samples must receive a 2.5 on a 3.0 rating scale demonstrating readiness for graduate level work by the graduate faculty selection committee (see Appendix A).

- Be a good fit for the program based on professional statement, resume/curriculum vitae, and references.

IMPORTANT FACTS ABOUT REGULAR ADMISSION:

- An unofficial transcript for preliminary review should be sent to the graduate coordinator. This process will help identify if you need preparatory post-baccalaureate coursework and/or ACOM 7390 after admission, in addition to the 33 hours required for the program.

- A 3.0 GPA must be met to maintain regular admission status. A GPA dropping below 3.0 will result in academic probation for a semester to allow the GPA to be raised. Students not raising their GPA to a 3.0 will be suspended from the program.

SPECIAL CONDITIONAL ADMISSION

Students who have supplied all admission materials and did not meet all requirements for regular admission may be admitted as special conditional students. Students seeking admission for special conditional admission must meet all of the following requirements:

- A baccalaureate degree with a cumulative GPA between 2.0 and 2.69 on a 4.0 scale from a regionally accredited domestic institution or an international institution recognized by the International Association of Universities with substantially the same undergraduate program found at UA Little Rock.

- Writing samples receiving a 2.5 on a 3.0 rating scale demonstrating readiness for graduate level work by the graduate faculty selection committee (see Appendix A).

- Be a good fit for the program based on professional statement, resume/curriculum vitae, and references.

IMPORTANT FACTS ABOUT SPECIAL CONDITIONAL ADMISSION:

- Special conditional admission applicants are reviewed and offered admission based on qualifications for admission in light of the number of special conditional admission slots available in the program. In some cases, special conditional admission may need to be deferred until slots are available.

- The student may be moved to regular admission status after completing 9 hours if he or she maintains a GPA of 3.0 or higher. The student will be dismissed after the first 9 hours if the GPA is not at least 3.0 or satisfactory progress is not being made toward meeting regular admission requirements.

- Graduate assistantships are not offered to special conditional applicants.

EARLY ENTRY ADMISSION

Exceptional UA Little Rock undergraduate students working toward a major or minor in Applied Communication Studies may apply and be accepted to the MAACS program and begin working towards their graduate degree while completing their baccalaureate degree. The Early Entry program will allow participating students to combine their undergraduate studies with graduate level coursework. Additionally, it will enable them to complete their graduate degree in a shorter amount of time than the traditional path.

EARLY ENTRY ADMISSION REQUIREMENTS

- Undergraduate students who are majoring or minoring in one of the undergraduate programs in Applied Communication may apply and be accepted any time after completing 75 or more hours of undergraduate coursework. However, at least 90 hours of undergraduate coursework must have been completed by the time the first graduate course is taken.

- All applicants must have at least a 3.0 overall GPA in all their undergraduate coursework, and a 3.2 GPA in 12 or more hours in our program, to include ACOM 2310, 2311, 3320, and one additional ACOM or equivalent class.

- All applicants must complete an application and be accepted into the desired graduate program and the UA Little Rock Graduate School.

- All applicants must complete an Early-Entry program form and have it approved by the graduate coordinator and the Graduate School. This form must be approved before the student begins graduate coursework. Failure to obtain prior approval negates the ability to "double count" courses.

ALTERNATIVE PATHWAYS TO ADMISSION

If an applicant does not meet regular or special conditional admission requirements but can document a substantive career record that suggests the experience, maturity, and aptitude for graduate work, they may have the options of working with the graduate selection committee for an alternative pathway to admission. This path will vary depending on the factors that preventing the applicant from receiving regular or special conditional admission (e.g., low score on writing samples or GPA). Additional undergraduate coursework may be recommended before re-applying.

Special, non-degree-seeking students—students not seeking a degree at UA Little Rock—who have completed all admission forms and have an undergraduate GPA of at least a 2.7 (2.0 for special conditional admission) may be admitted as special, non-degree-seeking students. Enrollment in this category of special students involves consultation with the graduate coordinator and the Graduate School.

Transient students enrolled in another accredited graduate school and who secure a letter of good-standing from the dean of that graduate school may be admitted to UA Little Rock as transient students.

APPENDIX A: APPLIED COMMUNICATION STUDIES APPLICANT WRITING ASSESSMENT RUBRIC

The following rating scale will be used by the graduate faculty selection committee. The graduate faculty selection committee will meet to discuss scores and review the full application packet. This scale focuses on program learning outcomes related to writing and application of communication theory in an applied context. Some writing samples, from other programs for instance, may not have the required use of theory and/or the development of implications.

1	Criteria is not addressed (e.g., wrong understanding of concept; a thesis is not present; no support for main claims, etc.)
2	Criteria is addressed, but not developed (e.g., analysis is surface; limited support for a claim; examples are present, but not closely tied to concept; etc.)
3	Criteria is addressed and developed

_____1. Responds to each part of the question/writing prompt/assignment

_____2. Clearly states a thesis/main claim that states a position on issues in case

_____3. Support includes relevant examples, references, and/or theories

_____4. Accurate use of concepts, terminology, and/or theory

_____5. Suggestions for practical implications connected to main claim/argument

_____6. Write in a manner that is clear (relatively free of grammar and spelling problems)

_____7. Well-organized (intro, previews, clear main points, summary restates position)

Comments:

1. What was missing or not adequately developed?

2. What possible patterns of learning strengths emerged?

3. What possible patterns of learning needs emerged?

4. Other comments.

A limited number of graduate assistantships for master's-level students 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

The program is offered in the evening and weekends in a synchronous online format. Course work can be completed in two calendar years. 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) can begin either in the summer or at the start of the fall semester and must be completed in sequence. Students desiring to start the program in the spring semester can work with the program coordinator to identify electives to take. 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 (ACOM 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 (ACOM 8300 Communication Skill Center Internship or ACOM 8304/ACOM 8604 Cooperative Education).

Example 2-year Plan (33 hours)

Summer-Start of First Year

- ACOM 7352 - Communication Training & Pedagogy
- ACOM 7390 - Introduction to Applied Communication Studies (prerequisite- not counted in 33 hours)

Fall – First Year

- ACOM 7301 - Human Communication Theory
- ACOM 7341 - Applied Communication Research

Spring- First Year

- ACOM 7322 - Organizational Communication Culture Analysis
- ACOM 7300 - Interpersonal Communication Concepts

Summer- Start of Second Year

- ACOM 7324 - Negotiation (possible elective)

- Elective

or

- ACOM 7352 - Communication Training & Pedagogy (if not already taken)

Fall- Second Year

- ACOM 7330 - Communicating Change and Information Diffusion

- ACOM 7323 - Conflict Analysis and Intervention

- ACOM 8301 - Master's Research Paper

Spring- Second Year

- ACOM 8310 - Seminar in Applied Communication Studies

- ACOM 7350 - Seminar in Effective Crisis Communication

Graduation Requirements

- 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

School of Mass Communication

Master of Arts

Mass Communication, M.A.

The Master of Arts in Mass Communication program is located within the School of Mass Communication (SMC) and emphasizes critical thinking about 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.

Students can complete this program in the traditional face-to-face setting or online. We offer courses online, in the evening and morning for the convenience of working professionals. 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 UA Little Rock 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.

EARLY ENTRY PROGRAM

Undergraduate students may apply and be accepted provisionally into the MA program any time after completing 75 or more hours of undergraduate course work. However, at least 90 hours of undergraduate coursework must have been completed by the time the first graduate mass communication course is taken.

All applicants must have a least a 3.2 overall GPA to be considered.

All applicants must complete an Early-Entry Application, be interviewed and approved for admission by the SMC graduate coordinator. The graduate coordinator's decision is final and cannot be appealed.

The Early-Entry Application must be approved by the graduate coordinator before the student begins graduate coursework. Failure to obtain prior approval negates the ability to "double count" courses.

Graduate Credit:

Once accepted into the MA program, students can take up to 12 hours of graduate cousework, which will count towards both the bachelor's and master's degree.

Students must complete their bachelor's degree before they complete 15 hours of graduate coursework.
Program Restrictions:
Students must meet with the SMC graduate coordinator after acceptance into the early entry program to plan and approve the graduate courses they will take.

Accepted students will have provisional status in the graduate program, pending the award of their baccalaureate degree. If, at the end of his/her baccalaureate degree, an early entry student has failed to meet the Graduate School admission requirement of a 3.0 overall undergraduate GPA with no grades below a B, she/he will be dismissed from the SMC MA program.

Students accepted into the early entry program will be subject to the same policies as traditional graduate students.

The early entry program may not be used in conjunction with the credit reservation program; therefore, no graduate courses take before admission to the early entry program may be applied to the MA degree.

Program Requirements

The Mass Communication graduate program offers two options: thesis and professional. A comprehensive project and at least 33 hours of study at UA Little Rock are required of all students. Each student's program is subject to an adviser's approval.

All MA students must complete:

Six (6) hours of Core Requirement:

- MCOM 7300 - Proseminar in Mass Communication

- MCOM 7305 - Mass Communication Processes and Effects

Three (3) hours of Law/ Policy Requirement

Three (3) hours of Law/ Policy Requirement by choosing one of these course:

- MCOM 5352 - News Media and the First Amendment

- MCOM 7330 - Seminar in Mass Communication Law

- MCOM 7331 - Internet Policy and Regulation

- an equivalent 700 level course approved by graduate coordinator.

Three (3) hours of Ethics/Diversity Requirement by choosing one of:

- MCOM 5375 - Journalistic Freedom and Responsibility

- MCOM 7316 - Ethnic and Alternative Media in America

- MCOM 5386 - Images of Minorities in the Media

- other equivalent 7000 level course approved by the graduate coordinator.

All courses usually are taken in the School of Mass Communication

All courses usually are taken in the School of Mass Communication; however, up to 9 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 Reporting

- MCOM 3320 Advanced Reporting

Two of the following courses may be required for graduate credit:

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.

- MCOM 5350 - Design and Production

- MCOM 5352 - News Media and the First Amendment

- MCOM 5358 - Reporting of Public Affairs

Program Options

Thesis Option

Requires 33 graduate credit hours, including MCOM 7300, MCOM 7305 and MCOM 7335, or MCOM 7340, or MCOM 7337, and a six-hour thesis with oral defense (MCOM 8300 or MCOM 8600).

Professional Option

Requires 33 graduate credit hours, including MCOM 7300, MCOM 7305 and an approved professional project MCOM 7398.

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.

School of Education

Master of Education

Curriculum and Instruction, M.Ed.

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 - Introduction to Educational Research (or approved discipline-based educational research course)

- SCED 7304 - Action Research Project

- TCED 7301 - Curriculum, Pedagogy, and Practice

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 - Learning Theories and Instructional Applications

  or

- EDFN 7330 - Human Development

Mastery of content and content pedagogy:

see concentration

Managing and monitoring student learning (six):

- EDFN 7370 - Educational Assessment

  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

Education, K-12 Education Concentration, M.Ed.

Master of Education in Education

The Education M.Ed. program is designed for candidates with a bachelors degree who want to become a teacher, but have not yet earned an initial teaching license. There are three licensure tracks: 1) The Education licensure track is for earning initial licensure in teaching various content areas, such as art, music, math, science, English Language Arts, and social studies, etc, (K-12th grade, 4-12th grade, or 7-12th grade); 2) the Middle Childhood Education licensure track is for earning initial licensure in teaching two of four major content areas in 4-8th grade; and the Special Education licensure track is for earning initial licensure in teaching special education K-12th grade. The courses for all licensure areas are all online.

The three licensure areas share common courses, but also have courses specific to the licensure and content areas. Please see the specific licensure areas for more information.

Candidates may be eligible for Provisional Licensure in any of the three licensure areas. Provisional licensure allows the candidates to teach in the area that they are seeking licensure as a teacher of record while completing the Education M.Ed. program.

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 (the Masters of Education, initial licensure program for which the candidate is seeking licensure) 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.

- Meet the required entrance exam requirements and the state required Praxis II content exam(s) for the specific licensure area (see https://www.ets.org/praxis/ar/requirements/).

- Complete and clear background checks. (Police and FBI)

- Successfully complete required ADE Professional Development modules including ProEthica, Complete the application for the provisional license. **NOTE**: Completion of application does not guarantee approval. All sites must be approved by the School of Education.

- Secure a teaching position and 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.

- (To attain Provisional Licensure in special education, the candidate must also successfully complete SPED 7301 Foundations of Special Education and one more required special education courses prior to applying for provisional licensure, as well as all other requirements above for provisional licensure).

Contact the School of Education Director of Licensure and Placement for more specific information on the requirements for and process of applying for the provisional license.

EDUCATION (CONTENT AREAS)

The Masters of Education, Education licensure track is for earning initial licensure in teaching various content areas, such as art, music, math, science, English Language Arts, and social studies, etc, (K-12th grade, 4-12th grade, or 7-12th grade). Candidates may pursue licensure in any first-time 7-12, K-12, or 4 12 licensure area excluding Special Education K-12 and School Guidance and Counseling K-12: http://www.arkansased.gov/public/userfiles/Educator_Effectiveness/Educator_Licensure/Licen sure_Areas_Chart_2018.pdf.

REGULAR ADMISSION 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

  The UA Little Rock graduate level, first time licensure programs (MEd in Education, for all all content areas, middle childhood, and special education licensure tracks and the Graduate Certificate in Education content area licensure tracks) will accept as an admission exam:

- ACT scores at or above a minimum

o Math 19

o Reading 19

o Writing 6 or English/Writing combined 19.

- If an individual has taken the ACT multiple times, we will consider the highest score in each category from those multiple exams.

- SAT at or above the minimum

o Math 510 (Before 3/2016 = 470)

o Evidence-Based Reading and Writing 510 (Before 3/2016 Writing = Critical Reading Seciton= 910)

o Writing 5 (Before 3/16 = No Equivalent)

- If an individual has taken the SAT multiple times, we will consider the highest score in each category from those multiple exams.

- If a prospective student has ACT scores below the minimum score, or if they do not have ACT scores:

- They may take the corresponding Accuplacer Next Generation exam or exams at the UA Little Rock Testing Center (testing services site: https://ualr.edu/testing/ and to the exam registration site https://www2.registerblast.com/ualr/Exam/List and must make at least a score that corresponds to the comparative ACT minimum score:

o Accuplacer Write Placer a score of 5 = Comp I or ACT 19

o Next Gen Reading 253 = ACT 19

- Next Gen Math (Quantitative or College Algebra) 250 = ACT 19

- They may choose to retake the ACT:

- ACT – Reading 19; Math 19; Writing 6 or English / Writing combined 19

- Or, they may also choose to take one of the following exams:

- GRE – (after 2011) Verbal=142; Quantitative=142; Writing=3.5; (before 2011) Verbal=370; Quantitative=370; Writing=3.5

- Praxis Core – Reading 156; Math 150; Writing 162

  Please Note: If a prospective student has taken the Praxis Core and not passed all sections, the EPP will consider Praxis Core minimum scores (reading 156; math 150; writing 162) in conjunction with their ACT passed sections. If a prospective student has taken the PPST the EPP will consider PPST minimum scores of Reading 172, Math 171, and Writing 173.

  We are trying to be as inclusive as possible in our application process and we do understand that we need to consider other information for admission to one of our initial licensure programs, such as:

- the most important requirements for specific licensure (for example, math scores are not as crucial for an art teacher as they will be for a math teacher),

- grades in certain courses (such as an A in a college level math course but a low score in the math exam),

- performance on assignments in certain courses (good grades on intensive writing assignments despite a low score in writing), or

- how close scores are to the minimum required score (for example, passing scores in reading and writing, and a score in math that is 1 point away from the minimum required score).

  In these cases, there is a process for considering admission even if students do not meet the minimum requirements described above. If you still have questions about admission and this process, please contact, Bruce Smith, Director of the School of Education, bdsmith@ualr.edu, 501.569.3124 or 501.569.3367

LEGAL REQUIREMENTS PRIOR TO FIELD OR INTERNSHIP PLACEMENTS

Students who apply to the 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.

PROGRAM REQUIREMENTS (30 HOURS)

- TCED 5383 - Instructional Skills

- TCED 5321 - Teaching Diverse Learners

- SPED 7301 - Foundations of Special Education

- EDFN 7370 - Educational Assessment

- TCED 7301 - Curriculum, Pedagogy, and Practice

- TCED 7202/TCED 7103 - Specialized Methods in Teaching Content/Supervised Clinical Teaching

- TCED 7600 - Internship

- 3hr Elective

GRADUATION REQUIREMENTS

- A minimum of 30 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 (see https://www.ets.org/praxis/ar/requirements/ for specific requirements for the various content areas, Secondary Education, and All Grades).

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; 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 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 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 online or 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

- TCED 5321 - Teaching Diverse Learners

  or

- EDFN 7330 - Human Development

- EDFN 7370 - Educational Assessment

- TCED 7103 - Supervised Clinical Teaching

- TCED 7106 - Instructional Skills Practicum

- TCED 7201 - Curriculum Design Seminar

- TCED 7202 - Specialized Instructional Methods

- TCED 7302 - Trends and Issues in Education Seminar

- EDFN 7303 - Introduction to Educational Research

- TCED 7306 - Instructional Skills and Classroom Management

- TCED 7601 - Internship (Must pass Praxis II Content before application approval)

- 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

Initial Licensure in Music Education Track

Required Courses

- MUED 5315 - Teaching Music in Performance Ensembles

  or

- MUED 5322 - Teaching General Music

- MUED 7103 - Supervised Clinical Teaching in Music (co-requisite with MUED 7202)

- MUED 7201 - Music Curriculum Design

- MUED 7202 - Specialized Music Instructional Methods (co-requisite with MUED 7103)

- MUED 7370 - Assessment in Music Education

- MUED 7373 - Foundations of Music Education

- TCED 5321 - Teaching Diverse Learners

  or

- EDFN 7330 - Human Development

- EDFN 7303 - Introduction to Educational Research

- SCED 7301 - Secondary School Curriculum

- SCED 7106 - Instructional Skills Practicum

- SCED 7302 - Trends and Issues in the Secondary School

- SCED 7306 - Instructional Skills and Classroom Management

- SCED 7601 - Internship

Education, Middle Education Concentration, M.Ed.

The Masters of Education, Middle Education Concentration is for earning initial licensure in teaching two of four major content areas in 4-8th grade (Middle School Math, Science, English Language Arts and/or Social Studies).

ADMISSIONS REQUIREMENTS

REGULAR ADMISSION

- 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

    The UA Little Rock graduate level, first time licensure programs (MEd in Education, for all all content areas, middle childhood, and special education licensure tracks and the Graduate Certificate in Education content area licensure tracks) will accept as an admission exam:

- ACT scores at or above a minimum

o Math 19

o Reading 19

o Writing 6 or English/Writing combined 19.

    If an individual has taken the ACT multiple times, we will consider the highest score in each category from those multiple exams.

- SAT at or above the minimum

o Math 510 (Before 3/2016 = 470)

o Evidence-Based Reading and Writing 510 (Before 3/2016 Writing = Critical Reading Section= 910)

o Writing 5 (Before 3/16 = No Equivalent)

    If an individual has taken the SAT multiple times, we will consider the highest score in each category from those multiple exams.

    If a prospective student has ACT scores below the minimum score, or if they do not have ACT scores:

- They may take the corresponding Accuplacer Next Generation exam or exams at the UA Little Rock Testing Center (testing services site: https://ualr.edu/testing/ and to the exam registration site https://www2.registerblast.com/ualr/Exam/List and must make at least a score that corresponds to the comparative ACT minimum score:

o Accuplacer Write Placer a score of 5 = Comp I or ACT 19

o Next Gen Reading 253 = ACT 19

o Next Gen Math (Quantitative or College Algebra) 250 = ACT 19

- They may choose to retake the ACT:

- ACT – Reading 19; Math 19; Writing 6 or English / Writing combined 19

- Or, they may also choose to take one of the following exams:

- GRE – (after 2011) Verbal=142; Quantitative=142; Writing=3.5; (before 2011)Verbal=370; Quantitative=370; Writing=3.5

- Praxis Core – Reading 156; Math 150; Writing 162

  Please Note: If a prospective student has taken the Praxis Core and not passed all sections, the
  EPP will consider Praxis Core minimum scores (reading 156; math 150; writing 162) in conjunction with their ACT passed sections. If a prospective student has taken the PPST the EPP will consider PPST minimum scores of Reading 172, Math 171, and Writing 173. We are trying to be as inclusive as possible in our application process and we do understand that we need to consider other information for admission to one of our initial licensure programs, such as:

- the most important requirements for specific licensure (for example, math scores are not as crucial for an art teacher as they will be for a math teacher),

- grades in certain courses (such as an A in a college level math course but a low score in the math exam),

- performance on assignments in certain courses (good grades on intensive writing assignments despite a low score in writing), or

- how close scores are to the minimum required score (for example, passing scores in reading and writing, and a score in math that is 1 point away from the minimum required score).

  In these cases, there is a process for considering admission even if students do not meet the minimum requirements described above. If you still have questions about admission and this process, please contact, Bruce Smith, Director of the School of Education, bdsmith@ualr.edu, 501.569.3124 or 501.569.3367.

LEGAL REQUIREMENTS PRIOR TO FIELD OR INTERNSHIP PLACEMENTS

Students who apply to the 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.

Program Requirements (33 hours)

- TCED 5383 - Instructional Skills
- TCED 5321 - Teaching Diverse Learners
- TCED 5330 - Classroom Management
- SPED 7301 - Foundations of Special Education
- EDFN 7370 - Educational Assessment
- TCED 7301 - Curriculum, Pedagogy, and Practice
- TCED 7202 - Specialized Instructional Methods
- TCED 7103 - Supervised Clinical Teaching
- TCED 7350 - Integrated Technology in K-12
- MCED 7313 - Introduction to Middle Level Education
- MCED 7319 - Internship
- MCED 7305 - Teaching Mathematics to the Gifted

Graduation Requirements

- A minimum of 33 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 for Middle School Education (https://www.ets.org/praxis/ar/requirements/)

Education, Provisional Initial Licensure Track, M.Ed.

Master of Education in Education

The Education M.Ed. program is designed for candidates with a bachelor's degree who want to become a teacher, but have not yet earned an initial teaching license. There are three licensure tracks: 1) The Education licensure track is for earning initial licensure in teaching various content areas, such as art, music, math, science, English Language Arts, and social studies, etc., (K-12th grade, 4-12th grade, or 7-12th grade); 2) the Middle Childhood Education licensure track is for earning initial licensure in teaching two of four major content areas in 4-8th grade; and the Special Education licensure track is for earning initial licensure in teaching special education K-12th grade. The courses for all licensure areas are all online.

The three licensure areas share common courses, but also have courses specific to the licensure and content areas. Please see the specific licensure areas for more information.

Candidates may be eligible for Provisional Licensure in any of the three licensure areas. Provisional licensure allows the candidates to teach in the area that they are seeking licensure as a teacher of record while completing the Education M.Ed. program.

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 (the Masters of Education, initial licensure program for which the candidate is seeking licensure) 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.

- Meet the required entrance exam requirements and the state required Praxis II content exam(s) for the specific licensure area (see https://www.ets.org/praxis/ar/requirements/).

- Complete and clear background checks. (Police and FBI)

- Successfully complete required ADE Professional Development modules including Preethical, Complete the application for the provisional license. **NOTE**: Completion of application does not guarantee approval. All sites must be approved by the School of Education.

- Secure a teaching position and 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.

- (To attain Provisional Licensure in special education, the candidate must also successfully complete SPED 7301 Foundations of Special Education and one more required special education courses prior to applying for provisional licensure, as well as all other requirements above for provisional licensure).

Contact the School of Education Director of Licensure and Placement for more specific information on the requirements for and process of applying for the provisional license.

EDUCATION (CONTENT AREAS)

The Masters of Education, Education licensure track is for earning initial licensure in teaching various content areas, such as art, music, math, science, English Language Arts, and social studies, etc, (K-12th grade, 4-12th grade, or 7-12th grade). Candidates may pursue licensure in any first-time 7-12, K-12, or 4 12 licensure area excluding Special Education K-12 and School Guidance and Counseling K-12: http://www.arkansased.gov/public/userfiles/Educator_Effectiveness/Educator_Licensure/Licensure_Areas_Chart_2018.pdf.

REGULAR ADMISSION 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

The UA Little Rock graduate level, first time licensure programs (MEd in Education, for all content areas, middle childhood, and special education licensure tracks and the Graduate Certificate in Education content area licensure tracks) will accept as an admission exam:

- ACT scores at or above a minimum

o Math 19

o Reading 19
o Writing 6 or English/Writing combined 19.

- If an individual has taken the ACT multiple times, we will consider the highest score in each category from those multiple exams.

- SAT at or above the minimum

o Math 510 (Before 3/2016 = 470)

o Evidence-Based Reading and Writing 510 (Before 3/2016 Writing = Critical Reading Section= 910)

o Writing 5 (Before 3/16 = No Equivalent)

- If an individual has taken the SAT multiple times, we will consider the highest score in each category from those multiple exams.

- If a prospective student has ACT scores below the minimum score, or if they do not have ACT scores:

- They may take the corresponding Accuplacer Next Generation exam or exams at the UA Little Rock Testing Center (testing services site: https://ualr.edu/testing/ and to the exam registration site https://www2.registerblast.com/ualr/Exam/List and must make at least a score that corresponds to the comparative ACT minimum score:

o Accuplacer Write Placer a score of 5 = Comp I or ACT 19

o Next Gen Reading 253 = ACT 19

o Next Gen Math (Quantitative or College Algebra) 250 = ACT 19

o They may choose to retake the ACT:

▪ ACT – Reading 19; Math 19; Writing 6 or English / Writing combined 19

o Or, they may also choose to take one of the following exams:

- GRE – (after 2011) Verbal=142; Quantitative=142; Writing=3.5; (before 2011) Verbal=370; Quantitative=370; Writing=3.5

- Praxis Core – Reading 156; Math 150; Writing 162

Please Note: If a prospective student has taken the Praxis Core and not passed all sections, the EPP will consider Praxis Core minimum scores (reading 156; math 150; writing 162) in conjunction with their ACT passed sections. If a prospective student has taken the PPST the EPP will consider PPST minimum scores of Reading 172, Math 171, and Writing 173.

We are trying to be as inclusive as possible in our application process and we do understand that we need to consider other information for admission to one of our initial licensure programs, such as:

- the most important requirements for specific licensure (for example, math scores are not as crucial for an art teacher as they will be for a math teacher),

- grades in certain courses (such as an A in a college level math course but a low score in the math exam),

- performance on assignments in certain courses (good grades on intensive writing assignments despite a low score in writing), or

- how close scores are to the minimum required score (for example, passing scores in reading and writing, and a score in math that is 1 point away from the minimum required score).

In these cases, there is a process for considering admission even if students do not meet the minimum requirements described above. If you still have questions about admission and this process, please contact, Bruce Smith, Director of the School of Education, bdsmith@ualr.edu, 501.569.3124 or 501.569.3367

LEGAL REQUIREMENTS PRIOR TO FIELD OR INTERNSHIP PLACEMENTS

Students who apply to the 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.

PROGRAM REQUIREMENTS (30 HOURS)

- TCED 5383 - Instructional Skills

- TCED 5321 - Teaching Diverse Learners

- SPED 7301 - Foundations of Special Education

- EDFN 7370 - Educational Assessment

- TCED 7301 - Curriculum, Pedagogy, and Practice

- TCED 7202/TCED 7103 - Specialized Methods in Teaching Content/Supervised Clinical Teaching

- TCED 7600 - Internship

- 3hr Elective

GRADUATION REQUIREMENTS

- A minimum of 30 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 (see https://www.ets.org/praxis/ar/requirements/ for specific requirements for the various content areas, Secondary Education, and All Grades).

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 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 Licensure and Placement Coordinator for information on the Praxis, background check, and the provisional license.

Education, Special Education K-12 Concentration, M.Ed.

Master of Education in Special Education

The Masters of Education, Special Education licensure track is for earning initial licensure in teaching Special Education K-12th grade.

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

The UA Little Rock graduate level, first time licensure programs (MEd in Education, for all all content areas, middle childhood, and special education licensure tracks and the Graduate Certificate in Education content area licensure tracks) will accept as an admission exam:

- ACT scores at or above a minimum

o Math 19

o Reading 19

o Writing 6 or English/Writing combined 19.

   If an individual has taken the ACT multiple times, we will consider the highest score in each category from those multiple exams.

- SAT at or above the minimum

o Math 510 (Before 3/2016 = 470)

o Evidence-Based Reading and Writing 510 (Before 3/2016 Writing = Critical Reading Section= 910)

o Writing 5 (Before 3/2016 = No Equivalent)

   If an individual has taken the SAT multiple times, we will consider the highest score in each category from those multiple exams.

- If a prospective student has ACT scores below the minimum score, or if they do not have ACT scores:

- They may take the corresponding Accuplacer Next Generation exam or exams at the UA Little Rock Testing Center (testing services site: https://ualr.edu/testing/ and to the exam registration site https://www2.registerblast.com/ualr/Exam/List and must make at least a score that corresponds to the comparative ACT minimum score:

o Accuplacer Write Placer a score of 5 = Comp I or ACT 19

o Next Gen Reading 253 = ACT 19

o Next Gen Math (Quantitative or College Algebra) 250 = ACT 19

- They may choose to retake the ACT:

- ACT – Reading 19; Math 19; Writing 6 or English / Writing combined 19

- Or, they may also choose to take one of the following exams:

- GRE – (after 2011) Verbal=142; Quantitative=142; Writing=3.5; (before 2011) Verbal=370; Quantitative=370; Writing=3.5

- Praxis Core – Reading 156; Math 150; Writing 162

  Please Note: If a prospective student has taken the Praxis Core and not passed all sections, the EPP will consider Praxis Core minimum scores (reading 156; math 150; writing 162) in conjunction with their ACT passed sections. If a prospective student has taken the PPST the EPP will consider PPST minimum scores of Reading 172, Math 171, and Writing 173. We are trying to be as inclusive as possible in our application process and we do understand that we need to consider other information for admission to one of our initial licensure
  programs, such as:

- the most important requirements for specific licensure (for example, math scores are not as crucial for an art teacher as they will be for a math teacher),

- grades in certain courses (such as an A in a college level math course but a low score in the math exam),

- performance on assignments in certain courses (good grades on intensive writing assignments despite a low score in writing), or

- how close scores are to the minimum required score (for example, passing scores in reading and writing, and a score in math that is 1 point away from the minimum required score).

  In these cases, there is a process for considering admission even if students do not meet the minimum requirements described above. If you still have questions about admission and this process, please contact, Kent Layton, Ph.D., College of Humanities, Arts, Social Sciences, & Education, UA Little Rock, kxlayton@ualr.edu, 501.916.3267

LEGAL REQUIREMENTS PRIOR TO FIELD OR INTERNSHIP PLACEMENTS

Students who apply to the 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. The insurance is provided through the School Workers Defense Program or by joining the Student Arkansas Education Association (SAEA).

- Criminal records check: Child Maltreatment check must be completed and submitted to director of placement and licensure.

- 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.

Program Requirements (36 hours)

- TCED 5383 - Instructional Skills

- TCED 5321 - Teaching Diverse Learners

- TCED 5330 - Classroom Management

- SPED 7301 - Foundations of Special Education
- SPED 5311 - Managing the Learning Environment B

or

- SPED 5344 - Disability Law

- SPED 5312 - Medical Problems in Child Development
- SPED 5326 - Assessment in Special Education
- SPED 5328 - Teaching Content in Education
- SPED 7690 - Internship

Graduation Requirements

- A minimum of 33graduate credit hours with a GPA of at least 3.0
- A portfolio accepted by committee

- Passing scores on all standardized examinations required by the Arkansas Department of Education for initial Special Education Licensure (see: https://www.ets.org/praxis/ar/requirements/) and passing scores on the Fundamentals of Reading test approved by the State.

Admissions Requirements

REGULAR ADMISSION

LICENSED CANDIDATES

Candidates who possess a standard or initial license in education and a minimum GPA of 2.75 or 3.0 in the last 60 hours may be admitted; these candidates want to obtain a master's degree in Special Education K-12 WITH licensure. Candidates electing this track will be prepared to deliver direct services in K-12 instructional settings.

Candidates may also be admitted based on their enrollment in an accredited graduate program with a minimum of 12 credits and a GPA of 3.0. A transfer candidate may transfer up to 15 credits with a GPA of 3.0.

Undergraduate candidates within 15 hours of completing their undergraduate program may begin the graduate certificate program and take up to 6 hours of the program with the approval of the graduate coordinator and instructor.

Candidates will exit the program with an advanced license in special education and a master's degree (M.Ed.).

CONDITIONAL ADMISSION

LICENSED CANDIDATES

- Candidates must possess an initial license in education; a baccalaureate degree from a regionally accredited institution; a GPA of 2.7-2.74. Candidates must take three introductory courses (9 hours) and make a cumulative GPA of 3.0 for full admission, **or**

- A provisional license and completion of at least 9 credits in another UALR graduate program or graduate program at another regionally accredited college or university with a cumulative GPA of at least 3.0

Gifted, Creative, and Talented Education, M.Ed.

A Master of Education degree in Gifted, Creative, and Talented Education is offered. In addition to the master's degree, there is a graduate certificate in Gifted and Talented Education. 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.

THIS PROGRAM IS NOW OFFERED 100% ONLINE THROUGH UA LITTLE ROCK ONLINE.

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 offered in a 100% online format.

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 a minimum of 30-33 credit hours, including 15 education core area hours; three additional approved gifted and talented hours; three elective hours; and a written comprehensive examination or 33 hours for the thesis or National Board Certification option.

The program of study includes the following required courses:

- GATE 7350 - Teaching the Gifted and Talented
- GATE 7355 - Creativity Seminar
- GATE 7357 - Curriculum and Instruction in Gifted Education
- GATE 7363 - Affective Needs of the Gifted and Talented
- GATE 7390 - Supervised Practicum

Graduation Requirements

- Cumulative GPA of at least 3.0 on an approved program of study
- Passing of the comprehensive exam

Learning Systems Technology, M.Ed.

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 2.7 (4.0 scale), or

- Master's degree from a regionally accredited institution with a cumulative grade point average of at least 3.00.

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 Theories 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 Environment and Education

- EDFN 7303 - Introduction to Educational Research

- 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: (3 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

- 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

Reading, M.Ed.

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.

Training Programs	Graduate Certificates	Graduate Degrees
Reading Recovery Teacher Leader	Literacy Coach Specialist Graduate Certificate	Master of Education in Reading [M.Ed.]
Reading Recovery Teacher	Dyslexia Therapist Graduate Certificate	Educational Specialist in Reading [Ph.D.]
		Doctor of Philosophy in Reading [Ph.D.]

OUT-OF-STATE RECIPROCITY

Out-of-state candidates seeking certification from other states as reading specialists or dyslexia therapists should consult with their respective State Education agencies about specific licensure standards and exam requirements. All candidates are strongly advised to consult closely with a graduate advisor for details regarding their program, concentration, and opportunities for certification and licensure.

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

The Master of Education 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. in Reading Program Requirements (30 Hours)

Choose 1A or 1B for Core requirements and then complete respective electives associated with each core. Candidates interested in adding licensure as a Reading Specialist or Dyslexia Therapist in Arkansas should consult the Notes 1 and 2 below the course list.

1A. Core Requirements for Reading Specialist (24 hours + 6 hrs. of electives; leads to reading specialist licensure in Arkansas)

- READ 7351 - Foundations of Teaching Reading
- READ 7367 - Teaching Children with Dyslexia
- READ 7354 - Teaching Reading in the Content Areas
- READ 7352 - Diagnosis of Reading Difficulties I
- READ 7385 - Formative Assessment and Interventions for Children with Dyslexia

- READ 7370 - Advanced Practicum in Reading

  or

- READ 7345 - Advanced Practicum in Intervention Models

- READ 7327 - Contemporary Curriculum Design

  or

- TCED 7301 - Curriculum, Pedagogy, and Practice
- READ 7357 - Seminar in Reading

1B. Core Requirements for Reading Generalist (12 hours + 18 hrs. of electives)

- READ 7351 - Foundations of Teaching Reading
- READ 7367 - Teaching Children with Dyslexia
- READ 7354 - Teaching Reading in the Content Areas
- READ 7352 - Diagnosis of Reading Difficulties I

Electives*

- READ 7306 - Literacy and Technology

  or

- TCED 7350

- READ 7310 - Literacy, Language, and Culture
- READ 7330 - Children's Literature Across the Curriculum
- READ 7340 - Best Practices in Literacy Instruction
- READ 7342 - Principles of Literacy and Cognition I
- READ 7343 - Principles of Literacy and Cognition II

- READ 7344 - Intervention Designs for Struggling Learners

- READ 7348 - Teaching the Writing Process in Schools

- READ 7353 - Diagnosis of Reading Difficulties II.

- READ 7387 - Advanced Practicum for Dyslexia Therapists

- READ 7395 - Comprehensive Literacy Model for School Improvement

- READ 7398 - Theory and Practice in Literacy

- MCED 7316 - Literature for Young Adolescents

- GATE 7350 - Teaching the Gifted and Talented

- EDFN 7303 - Introduction to Educational Research

*Courses in the Core not chosen may also serve as electives.

Notes

Note 1: To meet the requirements for licensure as a **Reading Specialist** in the State of Arkansas, the following courses must be completed from Core 1A: READ 7351, READ 7354, READ 7352, READ 7385, READ 7370 or READ 7345, READ 7327, and READ 7357; **and** pass the Reading Specialist-Praxis II. In addition, candidates must maintain and upload key assessments in the Chalk & Wire from each course and be a certified teacher in Arkansas.

Note 2: To meet the requirements for licensure as a **Dyslexia Therapist** in the State of Arkansas, the following courses must be completed from the Core and Elective areas above: READ 7367, READ 7353, READ 7385, READ 7387; **and** upload key assessments in Chalk & Wire from each course. In addition, candidates must pass the Praxis PLT and be a certified teacher in Arkansas.

Note 3: Out-of-state candidates: Out-of-state candidates seeking certification from other states should consult with their respective State Education agencies about specific licensure standards and exam requirements. All candidates are strongly advised to consult closely with a graduate advisor for details regarding their opportunities for licensure.

Note 4: Admission to this program does not require individuals to be licensed teachers. However, successful completion of this program requires candidates to work or to have worked in school settings (private or public) and to have access to school settings (private or public) for the purpose of working with children and teachers throughout a majority of the courses in the program. All candidates are strongly advised to consult closely with a graduate advisor for details regarding their opportunities for licensure and to determine if their work environment and professional goals are commensurate with the work and requirements of this program.

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 course work assessments uploaded into Chalk and Wire (Literacy & Culture and Intervention Concentrations only)

Doctor of Philosophy
Reading, Ph.D.

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.

Training Programs	Graduate Certificates	Graduate Degrees
Reading Recovery Teacher Leader	Literacy Intervention Specialist Graduate Certificate*	Master of Education in Reading [M.Ed.]
Reading Recovery Teacher	Literacy Coach Specialist Graduate Certificate	Educational Specialist in Reading [Ph.D.]
	Dyslexia Therapist Graduate Certificate	Doctor of Philosophy in Reading [Ph.D.]
	Literacy and Culture Graduate Certificate*	

*Program has been discontinued.

OUT-OF-STATE RECIPROCITY

Out-of-state candidates seeking certification from other states as reading specialists or dyslexia therapists should consult with their respective State Education agencies about specific licensure standards and exam requirements. All candidates are strongly advised to consult closely with a graduate advisor for details regarding their program, concentration, and opportunities for certification and licensure.

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 researchers. The Ph.D. in Reading is a research-oriented program of study with rigorous course work 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 Linguistic Processes in Reading

- 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 Educational Research

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

4. Dissertation.

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 Educational 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, and Linguistic Processes in Reading

- READ 8330 - Cognitive and Social Theories in Literacy Learning

- READ 8342 - Reading Comprehension: From Research to Practice

- READ 8345 - Theoretical Models and Historical Perspectives in Literacy

- READ 8399 - Doctoral Seminar

Research Core: (Select 15 hours)

- EDFN 8305 - Intermediate Statistics

- EDFN 8308 - Advanced Statistics

- EDFN 8306 - Advanced Educational Research

- 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 Acquisition

- READ 8348 - Scholarly Writing in Literacy

- READ 8349 - Research Practicum in Literacy

- READ 8301 - Supervision and Organization of Reading Programs

- READ 8302 - Professional Experiences in Reading

- 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 the Writing Process in 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 rationale 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 - Dissertation

- READ 9299 - Dissertation

- READ 9399 - Dissertation

- READ 9499 - Dissertation

- READ 9599 - Dissertation

- READ 9699 - Dissertation

- READ 9799 - Dissertation

- READ 9899 - Dissertation

- READ 9999 - Dissertation

Graduate Certificate

Dyslexia Therapist Graduate Certificate

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.

Training Programs	Graduate Certificates	Graduate Degrees
Reading Recovery Teacher Leader	Literacy Intervention Specialist Graduate Certificate*	Master of Education in Reading [M.Ed.]
Reading Recovery Teacher	Literacy Coach Specialist Graduate Certificate	Educational Specialist in Reading [Ph.D.]
	Dyslexia Therapist Graduate Certificate	Doctor of Philosophy in Reading [Ph.D.]
	Literacy and Culture Graduate Certificate*	

*Program has been discontinued.

Out-of-state candidates seeking certification from other states as reading specialists or dyslexia therapists should consult with their respective State Education agencies about specific licensure standards and exam requirements. All candidates are strongly advised to consult closely with a graduate advisor for details regarding their program, concentration, and opportunities for certification and licensure.

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

- READ 7353 - Diagnosis of Reading Difficulties II.
- READ 7385 - Formative Assessment and Interventions for Children with Dyslexia
- READ 7387 - Advanced Practicum for Dyslexia Therapists

Education Graduate Certificate

Students wishing to receive a graduate certificate in education will complete 21 graduate hours.

Students must meet the same admission requirements as those who apply for the master's degree program.

Program Requirements

- TCED 7202 - Specialized Instructional Methods

- TCED 7103 - Supervised Clinical Teaching

- TCED 7306 - Instructional Skills and Classroom Management

- EDFN 7330 - Human Development

- SPED 7301 - Foundations of Special Education

- EDFN 7370 - Educational Assessment

- TCED 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

Gifted and Talented Education Graduate Certificate

THIS PROGRAM IS NOW OFFERED BOTH IN A HYBRID FORMAT AND 100% ONLINE THROUGH UA LITTLE ROCK ONLINE.

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. Courses are offered in online format.

ADMISSION REQUIREMENTS

REGULAR AND CONDITIONAL ADMISSION

All applicants must have:

- A valid teacher licenses. (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 graduate certificate in Gifted and Talent Education includes five required courses:

- GATE 7350 - Teaching the Gifted and Talented

- GATE 7355 - Creativity Seminar

- GATE 7357 - Curriculum and Instruction in Gifted Education

- GATE 7363 - Affective Needs of the Gifted and Talented

- GATE 7390 - Supervised Practicum

Graduation Requirements

Cumulative GPA of at least 3.0 on an approved program of study.

Learning Systems Technology Education Graduate Certificate

The graduate certificate in Learning Systems Technology Education consists of 18 hours of coursework to specifically address competencies that align with industry standards. Courses can be applied towards the master's degree.

Program Requirements

- LSTE 7303 - Foundations of eLearning

- LSTE 7304 - eLearning Environment and Education

- LSTE 7311 - Introduction to Instructional Design

- LSTE 7315 - Instructional Design: Accessible and Universal

- LSTE 7317 - Mobile Learning Environments

- LSTE 7329 - Trends in eLearning

Literacy Coach Specialist Graduate Certificate

*Gainful Employment

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 of Literacy Programs

- 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.

Special Education K-12 Graduate Certificate

*Gainful Employment

There are three options in special education for advanced study. A **Graduate Certificate** program will be available to individuals who possess a teaching license and are teaching out of field. The certificate program is a flexible credit program of study that requires a minimum of 18 credits to obtain special education as an add-on to an existing initial or standard license. Candidates will be prepared to deliver non-categorical services to a variety of learners with disabilities. Through supervised practice, candidates will be required to demonstrate competencies required of K-12 special educators. This program does not result in teaching licensure.

ADMISSIONS

To be admitted, students must have one of the following:

- Admission to the Graduate School (an undergraduate cumulative GPA of 2.7 or better, or 3.0 in the last 60 baccalaureate hours), without an initial or standard license

- Admission into an initial licensure program in Early, Middle, or Secondary Education with a minimum of 12 hours and a cumulative GPA of 3.0. Candidates electing this route must sign an acknowledgement form that they were advised that the certificate in special education does not result in licensure in special education.

  Transfer students may be admitted with an official transcript from a state-sanctioned graduate program. A total of 9 credits may be approved with a GPA of 3.0.

Required Courses

- SPED 7301 - Foundations of Special Education

- SPED 7305 - Managing the Learning Environment

- SPED 5312 - Medical Problems in Child Development

- SPED 7352 - Assessment and Instructional Design II

- SPED 7395 - Practicum in Special Education

- SPED 5303 - Assistive Technology

- SPED 7343 - Disability Law

- SPED 7351 - Assessment and Instructional Design I

- SPED 7353 - Transition and Life Adjustment

School of Public Affairs

Master of Public Administration

Public Administration, M.P.A.

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

All applicants to the Master of Public Administration (MPA) program must have a baccalaureate degree from a regionally or internationally accredited institution. Applicants can be from any discipline or major.

Applicants must submit all of the application materials to the UA Little Rock Graduate School including.

- Transcripts from all previous institutions

- Test scores from either the Graduate Record Examination (GRE) or the Miller Analogy Test (MAT). Preferred scores on the GRE should be in the range of 153 for the verbal section and in the range of 148 for the quantitative sections. The preferred MAT score is 400.

All applicants should submit the following documents directly to the MPA graduate coordinator:

- A written statement of educational and career goals

- A current resume

- Two letters of recommendation

Work in other graduate or professional programs will be considered in making admissions decisions.

REGULAR ADMISSION

Applicants will be considered for regular admission if they have achieved a cumulative GPA of 3.0 (on a 4.0 scale) or better on a previous baccalaureate or graduate degree, or if they have achieved a GPA of 3.0 or better on their last 60 hours of coursework. Students must have regular admission status in order to be eligible for a graduate assistantship position.

CONDITIONAL ADMISSION

Applicants will be considered for conditional admission if they have achieved a GPA between 2.7 and 2.9 on a previous baccalaureate or graduate degree, or if they have achieved a GPA between 2.7 and 2.9 on their last 60 hours of coursework. Conditionally admitted students must maintain a GPA of 3.0 in their first 9 hours of coursework in order to remain in the program. Conditionally admitted students completing their MPA coursework with a GPA of 3.0 or higher after their first 9 credit hours will become regularly admitted students.

SPECIAL CONDITIONAL ADMISSION

Applicants with a cumulative GPA between 2.5 and 2.69 or in the last 60 hours who demonstrate extraordinary potential for professional achievement may petition the MPA Admissions Committee for special consideration if s/he has a minimum of 3 years of verified professional work experience in public service or nonprofit and is recommended by the admissions committee

after a personal interview. Applicants whose petitions are approved by the admissions committee will be subject to the same requirements and restrictions as listed above for conditionally admitted students.

EARLY ENTRY PROGRAM

Exceptional UALR undergraduate students for any major or discipline may apply and be accepted into the MPA program and begin working toward their graduate degree while completing their baccalaureate degree. The accelerated 4+1 early entry program offers a streamlined process for graduating students within a short timetable for professional careers in public or nonprofit organizations.

Undergraduate students may apply and be accepted provisionally into the MPA graduate program any time after completing 75 or more hours of undergraduate course work. However, at least 90 hours of undergraduate coursework must have been completed by the time the first MPA course is taken.

All applicants must have at least a 3.2 cumulative GPA at UA Little Rock in order to be considered. Applicants must complete an Early Entry Program form, be interviewed, and approved for admission by the MPA graduate coordinator. The MPA graduate coordinator's decision is final and cannot be appealed. The Early Entry form must be approved by the MPA graduate coordinator before the student begins graduate course work. Failure to obtain prior approval negates the ability to "double count" courses. Early Entry applicants must complete the online graduate application and be officially accepted into the MPA program and the Graduate School after the Early Entry form is approved by the MPA graduate coordinator.

Students must meet with the MPA graduate coordinator upon acceptance to map out and approve the course of study. Accepted students receive provisional status in the Graduate School, pending the award of their baccalaureate degree. If, at the end of the baccalaureate degree, the student has failed to meet the Graduate School admission requirement for the MPA program of 3.0 overall GPA, the student will be dismissed from the MPA program. Students accepted into the Early Entry program will be subject to the same policies as traditionally matriculated students. The Early Entry program may not be used in conjunction with the credit reservation program; therefore, no graduate courses taken before admission to the Early Entry program may be applied to the MPA degree.

Early Entry students will be required to enroll in only one course their first semester (PADM 7301 The Profession of Public Administration Required), and they must make a B or better in that course in order to continue.

Early Entry students can only enroll in 12 hours towards their MPA as an undergraduate student. These courses will count towards both the baccalaureate degree and the MPA degree. Students must complete their baccalaureate degree before they complete 15 hours of graduate MPA coursework.

*EARLY ENTRY STUDENTS CAN ENROLL IN ONLY 12 MPA HOURS AS AN UNDERGRADUATE.

Recommended Course Sequence

First Semester (spring or fall)

*The number of courses that the student is allowed to take during the 2nd semester will be based on performance in PADM 7301.

- PADM 7301 - The Profession of Public Administration Required

Second Semester (fall)

- PADM 7303 - Public Organization Theory Required

- PADM 7323 - Public Financial Administration Required

Third Semester (spring)

- PADM 7313 - Human Resource Management in the Public Sector

- PADM 7362 - Public Policy Analysis I

Program Requirements

The public administration degree requires 36 graduate credit hours, which includes 21 required hours that includes successful completion of the capstone seminar PADM 7373, and 15 approved elective hours. 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 or nonprofit administration are urged to take a three-hour internship (PADM 8301 or PADM 8302). Students considering pursuit of a doctoral degree are encouraged to take a six-hour thesis project (PADM 8000).

Required Core Courses (21 Hours)

- PADM 7301 - The Profession of Public Administration Required

- PADM 7303 - Public Organization Theory Required

- PADM 7313 - Human Resource Management in the Public Sector

- PADM 7323 - Public Financial Administration Required

- PADM 7362 - Public Policy Analysis I

- PADM 7363 - Public Policy Analysis II

- PADM 7373 - Seminar in Public Administration Required

Elective Courses (15 Hours)

- PADM 5341 - Seminar in Comparative Public Administration Elective

- PADM 5353 - Seminar in Public Budgeting Elective

- PADM 7324 - Financial Management for Nonprofit Organizations Elective

- PADM 7326 - Public and Organizational Networks for Nonprofits Elective

- PADM 7330 - Independent Study in Public Administration Elective

- PADM 7331 - Problems in Public Administration Elective

- PADM 7333 - Administrative Leadership and Public Management Elective

- PADM 7334 - Grant Writing and Fundraising Elective

- PADM 7335 - Urban Management Elective

- PADM 7336 - Managing the Not-for-Profit Sector Elective

- PADM 7337 - Public Organizational Change and Development Elective

- PADM 7338 - Public Personnel Problems and Issues Elective

- PADM 7339 - State Administration and Reform Elective

- PADM 7340 - Ethics in Public Administration Elective

- PADM 7341 - Managing Public Disputes Elective

- PADM 7342 - Public Revenue Management Elective

- PADM 7343 - Organizational Partnerships and Collaboration Elective

- PADM 7345 - Urban Management and Community Change Elective

- PADM 7346 - Current Issues in Public and Nonprofit Management

- PADM 7353 - Seminar in Intergovernmental Management Elective

- PADM 7380 - Public Program Evaluation Elective

- PADM 7385 - Seminar in Public Policy Elective

- PADM 7393 - Administrative Law Elective

- PADM 8300 - Internship in Public Administration

Graduation Requirements

- Successful completion of 36 hours of approved MPA courses with a GPA of at least 3.0,

- 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 graduate 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.

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.

*EARLY ENTRY STUDENTS CAN ENROLL IN ONLY 12 MPA HOURS AS AN UNDERGRADUATE.

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 7301 - The Profession of Public Administration Required

- PADM 7303 - Public Organization Theory Required

- PADM 7313 - Human Resource Management in the Public Sector

- PADM 7333 - Administrative Leadership and Public Management Elective

- PADM 7334 - Grant Writing and Fundraising Elective

- PADM 7335 - Urban Management Elective

- PADM 7336 - Managing the Not-for-Profit Sector Elective

- PADM 7339 - State Administration and Reform Elective

- PADM 7340 - Ethics in Public Administration Elective

- PADM 7353 - Seminar in Intergovernmental Management Elective

- PADM 7341 - Managing Public Disputes Elective

- PADM 7363 - Public Policy Analysis II

- PADM 7380 - Public Program Evaluation Elective

- PADM 7385 - Seminar in Public Policy Elective

- PADM 7362 - Public Policy Analysis I

- PADM 7373 - Seminar in Public Administration Required (must be in law-related subject)

JD Courses Approved for Credit in the MPA Program

- LAW 6203 Alternative Dispute Resolution

  - LAW 6249 Workers Compensation
  - LAW **and** 6256 Civil Liberties

  - LAW 6393 Civil Liberties
  - LAW 6269 Employment
    Law

  - LAW 6279 State & Local Taxation

  - LAW 6283 Health Law

  and

  - LAW 6387 Health Law

  - LAW 6300 Environmental Law

  - LAW 6318 Water Law

  - LAW 6343 Public Service Law

  - LAW 6357 Public Health Law

  - LAW 6361 Employment Discrimination

  - LAW 6372 Land Use

  - LAW 6374 Legislation

  - LAW 6375 Local Government

  - LAW 6399 Disability Law

  - LAW 6404 Mediation Clinic

Graduate Certificate

Conflict Mediation Graduate Certificate

*Gainful Employment

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

All applicants to the graduate certificate in Conflict Mediation must have a baccalaureate degree from a regionally or internationally accredited institution. Applicants can be from any discipline or major.

Applicants must submit all transcripts from previous institutions to the UA Little Rock Graduate School. Work in other graduate programs or professional programs will be considered in making admission decisions. In addition, all applicants must submit the following documents directly to the Conflict Mediation graduate coordinator:

- A written statement of educational and career goals

- A current resume

- Two letters of recommendation

REGULAR ADMISSION

Applicants will be considered for regular admission if they have achieved a cumulative GPA of 3.0 on a 4.0 scale or better on a previous baccalaureate or graduate degree, or if they have achieved a GPA of 3.0 or better on their last 60 hours of coursework.

CONDITIONAL ADMISSION

Applicants will be considered for conditional admission if they have achieved a GPA between 2.7 and 2.99 on a previous baccalaureate or graduate degree, or if they have achieved a GPA between 2.7 and 2.99 on their last 60 hours of coursework. Conditionally admitted students must maintain a GPA of 3.0 or better in their first 9 hours of coursework in order to remain in the program.

Applicants with a GPA between 2.4 and 2.69 who demonstrate extraordinary potential for professional achievement may petition the Conflict Mediation graduate coordinator for special consideration if s/he has a **minimum of three years** of verified professional work in nonprofits and is recommended after a personal interview. Applicants whose petitions are approved by the Conflict Mediation graduate coordinator will be subject to the same requirements and restrictions as those listed above for conditionally admitted students.

Program Requirements

The graduate certificate in Conflict Mediation requires 18 credit hours for completion- 3 required courses (9 credit hours) plus 3 electives (9 credit hours).

The following courses are required:

- ACOM 7323 - Conflict Analysis and Intervention
- ACOM 7324 - Negotiation
- LAW 6329 - Mediation Seminar

Students may choose three electives (9 hours) from the following:

- SOWK 8320 - Family Mediation
- PADM 7341 - Managing Public Disputes Elective
- TCED 7341 - Conflict Management in the Schools
- PSYC 7330 - Graduate Seminar in Psychology
- ACOM 7350 - Seminar in Effective Crisis Communication
- ACOM 5313 - Seminar: Studies in Communication

Practicum (ACOM 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.

Nonprofit Management Graduate Certificate

*Gainful Employment

The graduate certificate in Nonprofit Management is designed for students currently employed in nonprofit organizations was well as 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 government alike and how to use these for the successful leadership and management of nonprofit organizations. Learning with professional managers from other nonprofit organizations, students are able to develop their own personal styles of leadership and management while gaining knowledge and skills in topics outside their immediate job areas for further professional growth. Students gain valuable hands-on project and consulting experience and enjoy a close relationship with faculty and fellow colleagues in the program. For more information, see the website.

ADMISSION REQUIREMENTS

All applicants to the graduate certificate in Nonprofit Management must have a baccalaureate degree from a regionally or internationally accredited institution. Applicants can be from any discipline or major.

Applicants must submit all transcripts from previous institutions to the UA Little Rock Graduate School. Work in other graduate programs or professional programs will be considered in making admission decisions. In addition, all applicants must submit the following documents directly to the Nonprofit Management graduate coordinator:

- A written statement of educational and career goals
- A current resume
- Two letters of recommendation

REGULAR ADMISSION

Applicants will be considered for regular admission if they have achieved a cumulative GPA of 3.0 on a 4.0 scale or better on a previous baccalaureate or graduate degree, or if they have achieved a GPA of 3.0 or better on their last 60 hours of coursework.

CONDITIONAL ADMISSION

Applicants will be considered for conditional admission if they have achieved a GPA between 2.7 and 2.99 on a previous baccalaureate or graduate degree, or if they have achieved a GPA between 2.7 and 2.99 on their last 60 hours of coursework. Conditionally admitted students must maintain a GPA of 3.0 or better in their first 9 hours of coursework in order to remain in the program.

SPECIAL CONDITIONAL ADMISSION

Applicants with a GPA between 2.4 and 2.69 who demonstrate extraordinary potential for professional achievement may petition the Nonprofit Management graduate coordinator for special consideration if s/he has a **minimum of three years** of verified professional work in nonprofits and is recommended after a personal interview. Applicants whose petitions are approved by the Nonprofit Management graduate coordinator will be subject to the same requirements and restrictions as those listed above for conditionally admitted students.

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 group project to a nonprofit or government client.

Required Courses

- PADM 7336 - Managing the Not-for-Profit Sector Elective (Three hours)

- PADM 7374 - Capstone Project (Three hours)

Electives

Other elective courses must be approved in advance by the graduate coordinator.
Current approved elective courses include:

- PADM 7313 - Human Resource Management in the Public Sector
- PADM 7324 - Financial Management for Nonprofit Organizations Elective
- PADM 7326 - Public and Organizational Networks for Nonprofits Elective
- PADM 7334 - Grant Writing and Fundraising Elective
- PADM 7335 - Urban Management Elective
- PADM 7341 - Managing Public Disputes Elective
- PADM 7346 - Current Issues in Public and Nonprofit Management
- PADM 7380 - Public Program Evaluation Elective
- SPCH 7311 - Small Group Communication
- RHET 5375 - Grant Writing
- MCOM 7350 - PR for 21st Century Non-Profits

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 portions of the catalog, MCOM courses descriptions may be found in the Mass Communications portion of this catalog, RHET courses may be found under the Professional and Technical Writing portion of the catalog, and SOWK course descriptions may be found in the Social Work portions of this catalog.

College of Business, Health, and Human Services

Donald W. Reynolds Center, Suite 304, (501) 916-3356, (501) 569-8898 (fax)

- Professor Jane Wayland, Dean

- Professor Sonya F. Premeaux, Associate Dean

- Associate Professor Shannon Collier-Tenison, Associate Dean

The College of Business, Health, and Human Services is home to multiple professional programs offering associate, baccalaureate, master's, and doctorate degrees as well as certificates of proficiency, graduate certificates, and minors. Academic units within the CBHHS include the School of Business, School of Counseling, Human Performance, and Rehabilitation, School of Criminal Justice, School of Nursing, School of Social Work, and Department of Speech Language Pathology. The CBHHS is also home to three centers and public service units including the Arkansas Small Business Technology and Development Center, Arkansas Economic Development Institute, and Midsouth.

The college offers master's degrees and graduate certificates which prepare professionals for career advancement in all areas of business and in public and private as well as for-profit and not-for-profit organizations. The college is accredited by AACSB International, the highest standard of business school accreditation worldwide.

The following graduate degrees and certificates are offered:

- Business Administration, M.B.A.
- Business Information Systems and Analytics, M.S.
- Business Graduate Certificate
- Business Analytics Graduate Certificate
- Business Information Systems Graduate Certificate
- Financial Accounting Analysis Graduate Certificate
- Human Resources and Organizational Communication Graduate Certificate

The college partners with the Bowen School of Law to offer a concurrent JD/MBA program and with the University of Arkansas for Medical Sciences to offer a concurrent PharmD/MBA program.

School	Office
School of Business	Reynolds Center, Suite 205	(501) 916-3356
Department of Management, Marketing, and Technology	Reynolds Center, Suite 205	(501) 569-8854
School of Counseling, Human Performance, & Rehabilitation	Dickinson Hall, Suite 515	(501) 916-3169
School of Criminal Justice and Criminology	Ross Hall 5th Floor	(501) 569-3195
School of Social Work	Ross Hall 401	(501) 916-3240

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/mba for application information.) Students may enter the graduate certificates, evening MBA, or M.S. in BISA program in any semester.

Summer course offerings for the MBA and most graduate certificates are limited. International students entering in summer may be unable to meet the full-time status required for a student visa. Spring or Fall admission is recommended.

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 BISA. 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.

For students concurrently pursuing a Master's in Public Service at the Clinton School of Public Service, up to six hours of course work may be transferred from the MPS program to satisfy the electives requirement in the MBA.

PROGRAM DISMISSAL

A graduate business student receiving a grade of F in a graduate course will be permanently dismissed from the graduate program in which they are enrolled and will not be eligible for admission to other graduate business programs. If the F was received under extenuating circumstances, the student may appeal the dismissal to the college graduate committee within one year of receiving the failing grade.

Students receiving an F due to academic dishonesty will have no right of dismissal appeal once all levels of academic dishonesty and grade appeal processes have been exhausted.

ENROLLING IN CONCURRENT PROGRAMS

Applicants for the concurrent JD/MBA or PharmD/MBA 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.

UAMS PHARMD EARLY ADMISSION

Admission Requirements

- PharmD students may apply to and be provisionally accepted to the MBA program or a graduate certificate program any time after completing 75 or more hours of combined undergraduate and graduate coursework. However, at least 90 hours of coursework must have been completed by the time the first graduate business course is taken, and an official transcript validating attainment of a bachelor's degree meeting University policy or higher must be received by the Graduate School for full admission to and graduation from the MBA or graduate certificate program.
- All applicants must be in good academic standing in the PharmD program.
- All applicants must complete an application for and be accepted into the MBA or graduate certificate program and the UA Little Rock Graduate School.
- All applicants must complete a Declaration of Intent to Pursue Concurrent Program - PharmD/MBA or PharmD/GC form and have it approved by the program coordinators at both the UAMS College of Pharmacy and the UA Little Rock College of Business before beginning coursework.

Program Requirements

- Students admitted under the early admissions policy will be subject to the same policies as traditionally matriculated graduate students.

- Students admitted under the early admission policy will be subject to the same curricular requirements of traditionally admitted concurrent PharmD/MBA or graduate certificate students.

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

UA Little Rock 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. UA Little Rock seniors who are within 15 semester hours of completing baccalaureate business degrees with a 3.25 GPA or higher or a baccalaureate non-business degree with a 3.5 GPA or higher 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. 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 mbaadvising@ualr.edu.

School of Business
Master of Business Administration (MBA)

The **MBA with a Concentration in Business Analytics** develops students' business intelligence skills and evidence-based decision-making ability. The concentration provides students with practical experience using contemporary business intelligence tools and technologies.

Business Administration, Business Analytics Concentration (MBA)

Students seeking admission to the MBA program must meet one of the following criteria:

- (200 x cumulative GPA) + GMAT score (or converted GRE score) ≥1020, **or**

- (200 x GPA from last 60 undergraduate hours) + GMAT score (or converted GRE score) ≥ 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 GMAT 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 or a 3.5 GPA in the last 60 hours 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 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 complete an application and submit a GMAT waiver form along with other required admission documents. 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.

UNDERGRADUATE STUDENTS

UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate degrees with a 3.0 GPA or higher and have a GMAT score of at least 480 may enroll for a maximum of 6 semester hours of graduate business courses during their last undergraduate semester. UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate business degrees with a 3.25 GPA or higher or baccalaureate non-business degree with a 3.5 GPA or higher 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.

PROGRAM REQUIREMENTS

All students must demonstrate competency in the use of Excel spreadsheets through the passage of an online assessment. 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)

Note: Any or all foundation courses will be waived if the student passes assessments in the area(s).

- ACCT 7100 - Accounting Methods and Report

- ECON 7100 - Foundations of Business

- FINC 7100 - Finance Fundamentals

Core Courses (27 credit hours)

- BINS 7309 - Cloud-Based Business Intelligence

  or

- BINS 7350 - Information Systems Management

- ACCT 7304 - Accounting for Managerial Decision-Making

- ECON 7200 - Applied Problem Solving

- ECON 7313 - Economics and Global Business

- FINC 7311 - Applied Corporate Finance

- MGMT 7101 - Developing Leadership Skills I

- MGMT 7102 - Developing Leadership Skills II

- MGMT 7180 - Strategy for Competitive Advantage I

- MGMT 7210 - Operations and Supply Chain Management

- MGMT 7280 - Strategy for Competitive Advantage II

- MGMT 7310 - Management of Human Capital

- MKTG 7311 - Marketing for Profit and Growth

Concentration Courses (9 credit hours)

Select three of the following courses (9 hours):

- BINS 7303 - Systems Development and Database Design

  or

- BINS 5350 - Business Database Management
- BINS 5351 - Data Analysis and Reporting

- BINS 7304 - Business Applications for Decision Making

- BINS 7309 - Cloud-Based Business Intelligence

- BINS 7398 - Seminar in Current Topics —with permission of BINS chairperson

Business Administration, Financial Accounting Analysis, M.B.A.

The **MBA with a Concentration in Financial Accounting Analysis** develops students' financial data analytical skills. The concentration enables students to understand the assumptions and procedures behind the preparation of financial statements and develops the analytical skill set to understand and evaluate financial statements.

Master of Business Administration (MBA)

ADMISSIONS REQUIREMENTS

Students seeking admission to the MBA program must meet one of the following criteria:

- (200 x cumulative GPA) + GMAT score (or converted GRE score) ≥1020, **or**

- (200 x GPA from last 60 undergraduate hours) + GMAT score (or converted GRE score) ≥ 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 GMAT 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 or a 3.5 GPA in the last 60 hours 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 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 complete an application and submit a GMAT waiver form along with other required admission documents. 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.

UNDERGRADUATE STUDENTS

UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate degrees with a 3.0 GPA or higher and have a GMAT score of at least 480 may enroll for a maximum of 6 semester hours of graduate business courses during their last undergraduate semester. UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate business degrees with a 3.25 GPA or higher or baccalaureate non-business degree with a 3.5 GPA or higher 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.

PROGRAM REQUIREMENTS

All students must demonstrate competency in the use of Excel spreadsheets through the passage of an online assessment. 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)

Note: Any or all foundation courses will be waived if the student passes assessments in the area(s).

- ACCT 7100 - Accounting Methods and Report

- ECON 7100 - Foundations of Business

- FINC 7100 - Finance Fundamentals

Core Courses (24 credit hours)

- BINS 7350 - Information Systems Management

  or

- BINS 7309 - Cloud-Based Business Intelligence
- ECON 7200 - Applied Problem Solving

- ECON 7313 - Economics and Global Business

- FINC 7311 - Applied Corporate Finance

- MGMT 7101 - Developing Leadership Skills I

- MGMT 7102 - Developing Leadership Skills II

- MGMT 7180 - Strategy for Competitive Advantage I

- MGMT 7210 - Operations and Supply Chain Management

- MGMT 7280 - Strategy for Competitive Advantage II

- MGMT 7310 - Management of Human Capital

- MKTG 7311 - Marketing for Profit and Growth

Required Concentration Course (6 credit hours):

- ACCT 7305 - Analysis of Financial Statements

  or

- ACCT 7304 - Accounting for Managerial Decision-Making

- FINC 5350 - Financial Behavior and Modeling

  or

- FINC 5355 - Predictive Data Analysis

Elective Courses (3 hours):

- ACCT 5322 - Federal Taxation II

- ACCT 5352 - Advanced Auditing

- ACCT 5381 - Legal, Regulatory and Ethical Environment for Accountants

- BINS 7304 - Business Applications for Decision Making

- BINS 7309 - Cloud-Based Business Intelligence

- FINC 5383 - Applied Equity Analysis

- FINC 7320 - Advanced Investment Analysis

- FINC 5350 - Financial Behavior and Modeling

- FINC 5355 - Predictive Data Analysis

Business Administration, Human Resource Management Concentration, M.B.A.

Provides students with more in-depth knowledge of key areas of human resource management (HRM). The concentration focuses on the strategic role of HRM in organizational goal attainment, laws regulating the employment relationship, and understanding and influencing employee behavior.

Master of Business Administration (MBA)

ADMISSIONS REQUIREMENTS

Students seeking admission to the MBA program must meet one of the following criteria:

- (200 x cumulative GPA) + GMAT score (or converted GRE score) ≥1020, **or**

- (200 x GPA from last 60 undergraduate hours) + GMAT score (or converted GRE score) ≥ 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 GMAT 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 or a 3.5 GPA in the last 60 hours 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 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 complete an application and submit a GMAT waiver form along with other required admission documents. 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.

UNDERGRADUATE STUDENTS

UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate degrees with a 3.0 GPA or higher and have a GMAT score of at least 480 may enroll for a maximum of 6 semester hours of graduate business courses during their last undergraduate semester. UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate business degrees with a 3.25 GPA or higher or baccalaureate non-business degree with a 3.5 GPA or higher 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.

PROGRAM REQUIREMENTS

All students must demonstrate competency in the use of Excel spreadsheets through the passage of an online assessment. 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)
Note: Any or all foundation courses will be waived if the student passes assessments in the area(s).

- ACCT 7100 - Accounting Methods and Report

- ECON 7100 - Foundations of Business

- FINC 7100 - Finance Fundamentals

Core Courses (27 credit hours)

- BINS 7309 - Cloud-Based Business Intelligence

  or

- BINS 7350 - Information Systems Management

- ACCT 7304 - Accounting for Managerial Decision-Making
- ECON 7200 - Applied Problem Solving
- ECON 7313 - Economics and Global Business
- FINC 7311 - Applied Corporate Finance
- MGMT 7101 - Developing Leadership Skills I
- MGMT 7102 - Developing Leadership Skills II
- MGMT 7210 - Operations and Supply Chain Management
- MGMT 7310 - Management of Human Capital
- MGMT 7380 - Strategy for Competitive Advantage
- MKTG 7311 - Marketing for Profit and Growth

Required Concentration Courses (6 credit hours)

- MGMT 7341 - Strategic Human Resource Management
- MGMT 7345 - Employment Law for Managers

Elective Courses (choose one- 3 credit hours)

- ACOM 5357 - Communication and Managing Difference
- ACOM 7323 - Conflict Analysis and Intervention
- BINS 7308 - Advanced Business Communication
- MGMT 7312 - Team Development
- MGMT 7340 - Collective Bargaining

Business Administration, M.B.A.

The **Master of Business Administration** is a professional degree which prepares students from all educational and professional backgrounds for upper-management positions across all industries and types of organizations. The program equips students with sound knowledge of the strategically interrelated areas of business and of the impact of diversity and global issues in business as well as strong analytical, critical thinking, teamwork, technological, and presentation skills. The program includes all functional areas of business with the option to choose a concentration in business analytics, financial accounting analysis, human resource management, or organizational communication. These concentrations allow students to tailor their MBA degree to their individual interests and career goals. The MBA program can be pursued through self-paced and evening courses. Evening classes are offered through flexible delivery options allowing students to attend on campus or virtually via synchronous videoconferencing technology. The weekend program is offered in a hybrid format combining online content with on-campus class meetings one Saturday a month. (Concentrations cannot be pursued in the weekend program.)

Master of Business Administration (MBA)

ADMISSIONS REQUIREMENTS

Students seeking admission to the MBA program must meet one of the following criteria:

- (200 x cumulative GPA) + GMAT score (or converted GRE score) ≥1020, **or**

- (200 x GPA from last 60 undergraduate hours) + GMAT score (or converted GRE score) ≥ 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 GMAT 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 or a 3.5 GPA in the last 60 hours 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 combined with a minimum of five years post-baccalaureate professional work experience showing managerial duties and promotion to increasing levels of responsibility.

5. Having completed the Business Graduate Certificate with a 3.0 or higher GPA. Students that complete the Business Graduate Certificate with a 3.0 or higher GPA will be admitted to the MBA program without having to take the GMAT/GRE.

    All GMAT waivers will be evaluated on a case-by-case basis. To be considered for a GMAT waiver, candidates must complete an application and submit a GMAT waiver form along with other required admission documents. 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.

UNDERGRADUATE STUDENTS

UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate degrees with a 3.0 GPA or higher and have a GMAT score of at least 480 may enroll for a maximum of 6 semester hours of graduate business courses during their last undergraduate semester. UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate business degrees with a 3.25 GPA or higher or baccalaureate non-business degree with a 3.5 GPA or higher 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.

PROGRAM REQUIREMENTS

All students must demonstrate competency in the use of Excel spreadsheets through the passage of an online assessment. 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)

Note: Any or all foundation courses will be waived if the student passes assessments in the area(s).

- ACCT 7100 - Accounting Methods and Report
- ECON 7100 - Foundations of Business
- FINC 7100 - Finance Fundamentals

Core Courses (27 credit hours)

- BINS 7309 - Cloud-Based Business Intelligence

  or

- BINS 7350 - Information Systems Management

- ACCT 7304 - Accounting for Managerial Decision-Making
- ECON 7200 - Applied Problem Solving
- ECON 7313 - Economics and Global Business
- FINC 7311 - Applied Corporate Finance
- MGMT 7101 - Developing Leadership Skills I
- MGMT 7102 - Developing Leadership Skills II
- MGMT 7210 - Operations and Supply Chain Management
- MGMT 7310 - Management of Human Capital
- MGMT 7380 - Strategy for Competitive Advantage
- MKTG 7311 - Marketing for Profit and Growth

Electives (6 credit hours)

Six hours approved by graduate coordinator.

Concentrations

Students of the Business Administration program can have a concentration in their MBA, in one of the following concentrations:

- Business Analytics
- Financial Accounting Analysis
- Human Resource Management
- Organizational Communication

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.

PROGRAM DISMISSAL

A graduate business student receiving a grade of F in a graduate course will be permanently dismissed from the graduate program in which they are enrolled and will not be eligible for admission to other graduate business programs. If the F was received under extenuating circumstances, the student may appeal the dismissal to the college graduate committee within one year of receiving the failing grade. Students receiving an F due to academic dishonesty will have no right of dismissal appeal once all levels of academic dishonesty and grade appeal processes have been exhausted

CONCURRENT JD/MBA

Curricular Requirements

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 18 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 12 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, Secured Transactions, and Federal Income Taxation. 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.

ADMINISTRATIVE POLICIES AND PROCEDURES FOR C O N C U R R E N T JD/MBA:

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. Under no circumstance will concurrent degree enrollment be permitted during the first year of the full-time JD program. The Associate Dean for Academic Affairs may grant permission for a first-year, part-time division student who is not employed to register for both the required JD program curriculum and courses in the MBA program.

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 seven 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 seven years of enrolling in the School of Law.

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 7304 - Accounting for Managerial Decision-Making

- ACCT 7305 - Analysis of Financial Statements

- ACCT 7360 - Taxation of Pass-Through Entities

- ACCT 7365 - State and Local Taxation

- ECON 7313 - Economics and Global Business

- FINC 7311 - Applied Corporate Finance

- FINC 7320 - Advanced Investment Analysis

- FINC 7330 - Insurance and Risk Management

- FINC 7340 - Real Estate Markets

- FINC 7350 - Financial Institutions and Organizations

- MGMT 7340 - Collective Bargaining

- MGMT 7341 - Strategic Human Resource Management

Concurrent COB – UAMS Programs (PharmD/MBA)

Students enrolling in the PharmD/MBA program will be permitted to count six hours from their UAMS programs as MBA electives. Likewise, two to three MBA courses will be counted towards their PharmD elective requirements.

UAMS PHARMD EARLY ADMISSION

Admission requirements:

- PharmD students may apply to and be provisionally accepted to the MBA program or a graduate certificate program any time after completing 75 or more hours of combined undergraduate and graduate coursework. However, at least 90 hours of

  coursework must have been completed by the time the first graduate business course is taken, and an official transcript validating attainment of a bachelor's degree meeting University policy or higher must be received by the Graduate School for full admission to and graduation from the MBA or graduate certificate program.

- All applicants must be in good academic standing in the PharmD program.

- All applicants must complete an application for and be accepted into the MBA or graduate certificate program and the UA Little Rock Graduate School.

- All applicants must complete a Declaration of Intent to Pursue Concurrent Program – PharmD/MBA or PharmD/GC form and have it approved by the program coordinators at both the UAMS College of Pharmacy and the UA Little Rock College of Business before beginning coursework.

Business Administration, Organizational Communication Concentration, M.B.A.

The **MBA with a Concentration in Organizational Communication** equips students with specialized knowledge and skills in communications to improve employee interactions and relationships. The concentration develops both oral and written communication skills.

Master of Business Administration (MBA)

ADMISSIONS REQUIREMENTS

Students seeking admission to the MBA program must meet one of the following criteria:

- (200 x cumulative GPA) + GMAT score (or converted GRE score) ≥1020, **or**

- (200 x GPA from last 60 undergraduate hours) + GMAT score (or converted GRE score) ≥ 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 GMAT 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 or a 3.5 GPA in the last 60 hours 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 combined with a minimum of five years post-baccalaureate professional work experience showing managerial duties and promotion to increasing levels of responsibility.

5. All GMAT waivers will be evaluated on a case-by-case basis. To be considered for a GMAT waiver, candidates must complete an application and submit a GMAT waiver form along with other required admission documents. 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.

UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate degrees with a 3.0 GPA or higher and have a GMAT score of at least 480 may enroll for a maximum of 6 semester hours of graduate business courses during their last undergraduate semester. UALR undergraduate seniors who are within 15 semester hours of completing baccalaureate business degrees with a 3.25 GPA or higher or baccalaureate non-business degree with a 3.5 GPA or higher 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.

PROGRAM REQUIREMENTS

All students must demonstrate competency in the use of Excel spreadsheets through the passage of an online assessment. 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)

Note: Any or all foundation courses will be waived if the student passes assessments in the area(s).

- ACCT 7100 - Accounting Methods and Report
- ECON 7100 - Foundations of Business
- FINC 7100 - Finance Fundamentals

Core Courses (27 credit hours)
- BINS 7309 - Cloud-Based Business Intelligence

  or

- BINS 7350 - Information Systems Management

- ACCT 7304 - Accounting for Managerial Decision-Making
- ECON 7200 - Applied Problem Solving
- ECON 7313 - Economics and Global Business
- FINC 7311 - Applied Corporate Finance
- MGMT 7101 - Developing Leadership Skills I
- MGMT 7102 - Developing Leadership Skills II
- MGMT 7180 - Strategy for Competitive Advantage I
- MGMT 7210 - Operations and Supply Chain Management
- MGMT 7280 - Strategy for Competitive Advantage II
- MGMT 7310 - Management of Human Capital
- MKTG 7311 - Marketing for Profit and Growth

Required Concentration Course (3 credit hours):

- BINS 7308 - Advanced Business Communication

Elective Courses (choose two- 6 credit hours)
- ACOM 5350 - Crisis Communication
- ACOM 7323 - Conflict Analysis and Intervention
- ACOM 7324 - Negotiation
- ACOM 7352 - Communication Training & Pedagogy

Business Graduate Certificate

The graduate certificate in Business is a 12-credit hour program designed to provide students with a general overview of the major functional areas of business. It will provide foundational knowledge of business to those who do not have a business education background. MBA students are not eligible for the graduate certificate in Business.

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.

Required Courses

* (9 ACCT 7100 - Accounting Methods and Report
* ECON 7100 - Foundations of Business
* FINC 7100 - Finance Fundamentals
* MGMT 7310 - Management of Human Capital

* MKTG 7311 - Marketing for Profit and Growth

  or

* Some other MKTG course

Electives (3 hours)

* Choose one three-credit hour graduate business course for which you meet the prerequisites.
  hours)

Financial Accounting Analysis Graduate Certificate

The Graduate Certificate in Financial Accounting Analysis was developed in response to accounting and finance needs in the state.

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.

Program Requirements

The Graduate Certificate in Financial Accounting Analysis consists of 17-20 hours of coursework from the following courses:

Required Leveling Courses (3 hours)

- ACCT 7100 - Accounting Methods and Report
- FINC 7100 - Finance Fundamentals
- ECON 7100 - Foundations of Business
  (test out options available)

Required Courses (11 hours)

- ACCT 7305 - Analysis of Financial Statements

- ECON 7200 - Applied Problem Solving
- ECON 7313 - Economics and Global Business
- FINC 7311 - Applied Corporate Finance

Required Analytics Course (3 hours)

Choose one course from:
- BINS 7309 - Cloud-Based Business Intelligence
- FINC 5350 - Financial Behavior and Modeling
- FINC 5355 - Predictive Data Analysis
-

Elective Courses (3 hours)

Choose one from:

- ACCT 5322 - Federal Taxation II
- ACCT 5352 - Advanced Auditing
- ACCT 5381 - Legal, Regulatory and Ethical Environment for Accountants
- BINS 7309 - Cloud-Based Business Intelligence
- BINS 7304 - Business Applications for Decision Making
- FINC 5350 - Financial Behavior and Modeling
- FINC 5355 - Predictive Data Analysis
- FINC 5383 - Applied Equity Analysis
- FINC 7320 - Advanced Investment Analysis

Human Resources and Organizational Communication Graduate Certificate

*Gainful Employment

The Graduate Certificate (GC) in Human Resources and Organizational Communication is an 18 credit hour program designed to equip students with specialized knowledge of human behavior in the workplace and in the application of effective interpersonal communication practices to human resource functions. Students will learn how social psychological concepts influence employee behavior and will gain a greater understanding of how human resource management and applied communication contributes to the strategic success of an organization.

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.

Required Courses (9 hours):

- MGMT 7341 - Strategic Human Resource Management
- MGMT 7345 - Employment Law for Managers
- MGMT 7310 - Management of Human Capital

Elective Courses (9 hours):

- ACOM 5312 - Intercultural Communication
- ACOM 5357 - Communication and Managing Difference
- ACOM 7323 - Conflict Analysis and Intervention
- ACOM 7324 - Negotiation
- ACOM 7350 - Seminar in Effective Crisis Communication
- ACOM 7352 - Communication Training & Pedagogy
- BINS 7308 - Advanced Business Communication
- MGMT 7312 - Team Development
- MGMT 7340 - Collective Bargaining

Department of Management, Marketing, and Technology

BUSINESS INFORMATION SYSTEMS

Reynolds Center, Suite 205, (501) 569-8854

Master of Science

Business Information Systems and Analytics, M.S.

ADMISSION REQUIREMENTS

REGULAR ADMISSION

M.S. in Business Information Systems and Analytics (BISA) 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 BISA program (GMAT or GRE score). Students seeking automatic admission to the M.S. in BISA program must meet one of the following criteria:

1. (200 x cumulative GPA) + GMAT score (or converted GRE score) ≥ 1020, OR
2. (200 x GPA from last 60 undergraduate hours) + GMAT score (or converted GRE score) ≥ 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.

Students completing the Business Analytics Graduate Certificate (BUAL-GC) with a 3.0 or higher GPA will be admitted to the Masters of Science in Business Information Systems and Analytics program. They will not have to take the GMAT/GRE if successfully completing BUAL-GC.

WAIVER OF GMAT OR GRE REQUIREMENT:

The M.S. in BISA 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 BISA graduate faculty reserve the right to interview GMAT waiver candidates at its discretion.

CONDITIONAL ADMISSION

M.S. in BISA 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 BISA 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 M.S. in BISA program. Students conditionally admitted to the M.S. in BISA program must achieve a 3.25 GPA in the first 12 hours of study, or they will be dismissed.

EARLY ENTRY

UA Little Rock students enrolled in the BBA in Business Information Systems or Business Analytics degree who meet the requirements below may receive early admission into the master of science program in Business Information Systems and Analytics and thus count up to 12 hours of coursework for both the undergraduate and graduate degree. Participating students combine their undergraduate studies with related graduate-level work and can complete their graduate degree in a shorter amount of time than the traditional path.

Undergraduate students may apply and be accepted any time after completing 75 or more hours of undergraduate coursework. However, at least 90 hours of undergraduate coursework must have been completed by the time the first graduate course is taken.

- All applicants must have at least a 3.25 overall GPA.

- All applicants must complete an application for and be accepted into the MS in Business Information Systems and Analytics program and the UA Little Rock Graduate School.

- All applicants must complete an Early-Entry Program form and have it approved by the graduate coordinator of the MS in BISA program, the graduate director of the School of Business, and the Graduate School. This form must be approved before the student begins graduate coursework. Failure to obtain prior approval negates the ability to "double count" courses.

- Once accepted into the program, students must maintain a 3.0 overall average in their undergraduate coursework and, as required by the Graduate School, no grades below a B. Otherwise the student will be dismissed from the graduate program.

  Once accepted into a graduate program, students can take up to 12 hours of graduate coursework, which will count towards both the baccalaureate degree and the graduate degree. Students must finish their baccalaureate degrees before they complete 15 hours of graduate coursework.

Note: Students may request a break of up to two semesters between completion of their BBA degree and start of their Business Information Systems and Analytics (BISA) courses, as stated in the UA Little Rock Graduate Student Leave of Absence Policy (Policy #509.12). If a student does not resume graduate studies after the approved leave time expires, the student will then be released from the Early Entry BBA to MS in Business Information Systems Program. The student may then reapply to the graduate program using the regular admission process. Applications to the Early Entry Program should be submitted to the MS in Business Information Systems and Analytics coordinator.

PROGRAM REQUIREMENTS

Competency in Object-Oriented programming (BINS 5312 or equivalent), which can be met with prior course work or experience. A high impact experiential learning activity, such as an internship, competition, or industry-based project, is required for graduation from the M.S. in Business Information Systems and Analytics degree.

Foundation Courses

(four graduate credits which may be waived with prior undergraduate coursework)

- ACCT 7100 - Accounting Methods and Report

- BINS 7303 - Systems Development and Database Design

Undergraduate Equivalent

- ACCT 2310 Principles of Accounting I

  and

  - BINS 3307 Systems Dev Methodologies

  and

- BINS 4350 Business Data Mgmt. Systems

Required Core Courses (27 graduate credits)

- ACCT 7304 - Accounting for Managerial Decision-Making

- BINS 7304 - Business Applications for Decision Making

- BINS 7305 - Advanced Database Management Systems

- BINS 7307 - Systems Analysis and Design Methods

- BINS 7308 - Advanced Business Communication

- 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

Business Analytics Graduate Certificate

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.

Program Requirements

The graduate certificate in Business Analytics requires 15 hours.

Required Core Courses (six hours)

- BINS 5351 - Data Analysis and Reporting

- BINS 7304 - Business Applications for Decision Making
  or
- BINS 7309 - Cloud-Based Business Intelligence

Elective Courses (nine hours)

*If student has no undergraduate database course

- BINS 5350 - Business Database Management

  or

- BINS 7303 - Systems Development and Database Design *

- BINS 7398 - Seminar in Current Topics (with approval of program coordinator)

- BINS 7304 - Business Applications for Decision Making

  or

- BINS 7309 - Cloud-Based Business Intelligence
- IFSC 5325 - Data Mining Concepts and Techniques
- IFSC 5360 - Social Computing
- IFSC 7360 - Data Protection and Privacy
- IFSC 5345 - Information Visualization
- IFSC 5399 - Special Topics (by consent of graduate coordinator)
- FINC 5355 - Predictive Data Analysis

Business Information Systems Graduate Certificate

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.

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 5351 - Data Analysis and Reporting

- BINS 7303 - Systems Development and Database Design

  or

- BINS 5350 - Business Database Management

- BINS 7304 - Business Applications for Decision Making
- BINS 7305 - Advanced Database Management Systems
- BINS 7307 - Systems Analysis and Design Methods

- BINS 7398 - Seminar in Current Topics (with approval of program coordinator)

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

- BINS 7350 - Information Systems Management

  or
- MGMT 7101 - Developing Leadership Skills I

  and

- BINS 7250 - Strategic Mgmt. of IS & Tech

- BINS 7352 - Emerging Technologies and Strategic Issues

School of Counseling, Human Performance, & Rehabilitation

Master of Arts

Counseling, Counselor Education Track, M.A.

Counselor Education Track

Counselor Education Courses (minimum B grade).

- CNSL 7300 - Foundations for School Guidance and Counseling Programs

- CNSL 7301 - Counseling Theories and Applications

- CNSL 7302 - Models and Techniques for Counseling Interviews

- CNSL 7303 - Career Development, Planning, and Information Services

- CNSL 7305 - Appraisal Resources and Services in Counseling

- CNSL 7307 - Theories and Techniques of Group Counseling

- CNSL 7308 - Cross Cultural Counseling

- CNSL 7313 - Ethical and Legal Issues in the Counseling

- CNSL 7330 - Practicum: School Counseling

- CNSL 7340 - Internship: School Counseling

  OR

- CNSL 7640 - Internship: School Counseling (300/600 contact hours; 600 total required)

- COUN 7366 - Applied Counseling Research

- COUN 7380 - Human Development for Counseling

Electives (9hours; requires approval of Program Coordinator)

No more than 9 hours of approved transfer work can count towards program.

Counseling, M.A.

The Master of Arts in Counseling (COUN) is a program aimed at preparing 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 web-based with the exception of two skill-building courses. The two courses 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 (ualr.edu/rc). Graduates of this program qualify for licensure as professional counselors in Arkansas and many other states.

ADMISSION REQUIREMENTS

REGULAR AND CONDITIONAL ADMISSION

All applicants must have:

- Completed an application for admission through the UA Little Rock 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 2.70 (3.00 in the last 60 hours)

  or

- If the student's undergraduate GPA is **below a 2.70 overall or 3.00 in the last 60 hours,** achieving 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: "Conditional" means that the student must make a B or greater in the first 12 hours taken in the UA Little Rock Rehabilitation Counseling curriculum.

There are two categories within conditional admission:

- **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 as "conditional" if they have successfully completed a minimum of 9 semester hours in a relevant graduate program at UA Little Rock or another regionally accredited institution with a GPA of at least 3.0 and a grade of B or greater in each course taken.

   or

- **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 can be admitted with advanced standing. Up to six semester hours credit toward advanced standing may be awarded on an individual basis by the program coordinator upon recommendation of the program advisory committee.

Note: 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 curriculum has four components: Rehabilitation, Counseling, Foundations/Electives, and Field Work/Application. The field work requires 700+ hours of supervised practice in a rehabilitation setting under the supervision of a certified rehabilitation counselor (CRC).

TRANSFER CREDIT

Students have the opportunity(upon review and approval) to transfer as many as 27 semester hours of credit from other accredited graduate programs.

Specializations

Counseling Education Track Plan

Counselor Education Courses (minimum B grade)
- CNSL 7300 - Foundations for School Guidance and Counseling Programs
- CNSL 7301 - Counseling Theories and Applications
- CNSL 7302 - Models and Techniques for Counseling Interviews
- CNSL 7303 - Career Development, Planning, and Information Services
- CNSL 7305 - Appraisal Resources and Services in Counseling
- CNSL 7307 - Theories and Techniques of Group Counseling
- CNSL 7308 - Cross Cultural Counseling
- CNSL 7313 - Ethical and Legal Issues in the Counseling
- CNSL 7330 - Practicum: School Counseling
- CNSL 7340 - Internship: School Counseling

   or

- CNSL 7640 - Internship: School Counseling
- COUN 7366 - Applied Counseling Research
- COUN 7380 - Human Development for Counseling

Clinical Rehabilitation Counselling Track Plan

Phase 1

Phase 1 courses must be completed before beginning Phase 2

- COUN 7360 - Rehabilitation Foundations

- COUN 7366 - Applied Counseling Research

- COUN 7362 - Psychological Aspects of Disability

- COUN 7361 - Medical Aspects of Disability

- CNSL 7301 - Counseling Theories and Applications

- COUN 7380 - Human Development for Counseling

- COUN 7305 - Ethics and Advocacy for Counselors

Phase 2

Phase 2 courses must be completed before beginning Phase 3

- CNSL 7308 - Cross Cultural Counseling

- COUN 7363 - Career Counseling and Placement

- COUN 7367 - Clinical Assessment

- COUN 7369 - Introduction to Family Counseling
- COUN 7370 - Psychopharmacology for Counselors

- COUN 7368 - Foundations of Substance Abuse

- CNSL 7310 - Human Sexuality

Phase 3

Phase 3 courses should be completed before beginning Phase 4

- CNSL 7302 - Models and Techniques for Counseling Interviews

- CNSL 7307 - Theories and Techniques of Group Counseling

- COUN 7364 - Case Management

- COUN 7365 - Counseling Practicum

Internship

One course can be taken with Internship with faculty advisor approval

- COUN 7660 - Internship in Counseling

Clinical Mental Health Counseling Track Plan

Phase 1

Phase 1 courses must be completed before beginning Phase 2

- COUN 7304 - Foundations of Mental Health Counseling

- COUN 7366 - Applied Counseling Research

- COUN 7362 - Psychological Aspects of Disability

- COUN 7361 - Medical Aspects of Disability

- CNSL 7301 - Counseling Theories and Applications

- COUN 7380 - Human Development for Counseling

- COUN 7305 - Ethics and Advocacy for Counselors

Phase 2

Phase 2 courses should be completed before beginning Phase 3

- CNSL 7308 - Cross Cultural Counseling
- COUN 7363 - Career Counseling and Placement

- COUN 7367 - Clinical Assessment

- COUN 7369 - Introduction to Family Counseling

- COUN 7370 - Psychopharmacology for Counselors

- COUN 7368 - Foundations of Substance Abuse

- CNSL 7310 - Human Sexuality

Phase 3

Phase 3 courses should be completed before beginning Phase 4

- CNSL 7302 - Models and Techniques for Counseling Interviews

- CNSL 7307 - Theories and Techniques of Group Counseling

- COUN 7364 - Case Management

- COUN 7365 - Counseling Practicum

Internship

One course can be taken with Internship with faculty advisor approval

- COUN 7660 - Internship in 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 Counseling program. Students must achieve a "B" or greater in all core coursework to graduate. In the event that a "B" is not achieved in one of the core courses, the student must repeat the course.

Rehabilitation of the Blind Orientation & Mobility, M.A.

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 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.
special instances, in other states.

- 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.

Rehabilitation of the Blind Program Plan

Counseling Courses (36 hours)

- RHBL 7302 - Techniques for Helping Relationships

- RHBL 7315 - Medical Aspects of Blindness and Associated Disabilities

- 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 7325 - Implications of Low Vision

- RHBL 7326 - Seminar: Underserved Populations

- RHBL 7390 - Supervised Practice

- RHBL 7395 - Internship

- COUN 7360 - Rehabilitation Foundations

- COUN 7362 - Psychological Aspects of Disability

- COUN 7366 - Applied Counseling Research

Education Courses (3 hours)

- SPED 7305 - Managing the Learning Environment

Elective (3 hours; requires approval)

Transfer Courses (0-9hours; requires approval)

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

Master of Science

Health Education and Promotion, M.S.

The Master of Science in Health Education and Promotion is designed to provide professional educational opportunities to interested students, wellness directors, health education practitioners including certified health education specialists, researchers, corporate wellness/fitness coordinators, health department personnel and health 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. Students are eligible for **regular admission** with a GPA of 2.7. Students with a GPA of 2.0 may petition for **special conditional admission** based on the following criteria. Applicants for **special conditional admission** must discuss and provide evidence regarding two or more of the following criteria as part of the petition:

- Amount of time elapsed since the previous degree (5+ years recommended)

- Professional experience in writing and/or teaching

- Extraordinary circumstances related to the low GPA

- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Reference letters. Applicants should obtain two 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 Education and Promotion 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 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 Education and Promotion students must complete a total of 36 credit hours.

Core Courses (9 hours):

- HHPS 7301 - Research Methods in Health Sciences

- HHPS 7302 - Basic Statistics in Health Sciences

- HHPS 7303 - Evaluation of Health Programs

Health Education and Promotion Requirements (21 hours):

- HHPS 7310 - Theoretical Foundations of Health Education

- HHPS 7311 - Concepts and Methods of Health Education

- HHPS 7304 - Intro to Community and Public Health

- 12 hours of HHPS electives approved by program coordinator

Sport Management, M.S.

The Master of Science in Sport Management program prepares students to pursue careers in commercial sport and recreation, professional or collegiate athletics administration, and public or municipal sport and recreation. Through classroom instruction, internship, and community experiences, the program integrates competency areas including facilities, finance, legal aspects, promotion, research, and leadership within the context of sport organizations.

The Master of Science in Sport Management is a 36-hour program, including 6 hours of thesis/project/internship and a comprehensive exam.

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 2.7 overall GPA or 3.0 in the last 60 hours is required.

Applicants for admission to the M.S. in 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 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 coursework taken as a special student does not guarantee acceptance into the program.

Program Requirements

Master of Science in Sport Management students must complete a total of 36 credit hours.

Core Courses (6 hours):

- HHPS 7301 - Research Methods in Health Sciences

- HHPS 7302 - Basic Statistics in Health Sciences

Exercise Science Requirements (24 hours):

- HHPS 7322 - Administration of Physical Education and Sport

- HHPS 7330 - Management and Leadership in Sport Organizations

- HHPS 7331 - Sport Law

- HHPS 7333 - Issues and Ethics in Sports Management

- HHPS 7334 - Sport Marketing

- HHPS 7336 - Fiscal Management in Sport Organizations

- HHPS 7337 - Sport Facility and Event Management

- Electives with the approval of Sport Management Coordinator

Project or Thesis (6 hours):

- HHPS 7198 - Project Preparation

  or

- HHPS 7398 - Project Preparation

  or

- HHPS 7698 - Project

  or

- HHPS 7199 - Thesis Preparation

  or

- HHPS 7399 - Thesis Preparation

  or

- HHPS 7699 - Thesis

Graduation Requirements

Students must successfully complete 36 hours of approved courses, a comprehensive exam, and a thesis or project.

Graduate Certificate

Orientation and Mobility of the Blind Graduate Certificate

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.

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.

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

- 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.

School for Criminal Justice and Criminology

Master of Arts
Criminal Justice, M.A.

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)

- Score of at least 400 on the Miller Analogies Test (MAT) or 300 on the combine verbal and analytical sections of the Graduate Record Examination (GRE)

- An undergraduate statistics and undergraduate research methods course

- An oral interview with the program coordinator may be required

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 Portfolio Preparation and CRJU 8303 Thesis. 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 in Criminal Justice and Criminology

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 Preparation

- CRJU 8303 - Thesis

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
Criminal Justice, M.S.

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:

- are currently working in the criminal justice system and seeking to move into higher supervisory roles
- are currently working in the criminal justice system and seeking to broaden their skills by obtaining job-related knowledge and expertise
- are seeking to broaden their skills and knowledge in order to secure employment in the criminal justice system

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.

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 - Pro-seminar

- CRJU 7320 - Applied Research and Analysis

- CRJU 7321 - Criminal Justice Organizations and Management

- CRJU 7304 - Criminal Justice Policy

- CRJU 7305 - Seminar in Criminal Law

- CRJU 7330 - Capstone

Electives

- CRJU 7303 - Criminal Justice Systems

- CRJU 7322 - Foundations of Policing

- CRJU 7323 - Ethics in Criminal Justice

- CRJU 7340 - Correctional Administration

- CRJU 7370 - Juvenile Delinquency Problems

- CRJU 7390 - Independent Study

- CRJU 7393 - Seminar on Special Topics in Criminal Justice (May be repeated for credit)

Degree Plan

Please consult with the CRJU-M.S. graduate coordinator.

Doctor of Philosophy
Criminal Justice, Ph.D.

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 that 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 and a written project with oral defense.

- Students who successfully complete all requirements for the Ph.D. will be awarded both an M.A. and a Ph.D. The first three chapters of their dissertation will be considered completion of their thesis. Applicants with only a Juris Doctorate (no master's degree) will not be directly admitted to the program but will be required to take the MACJ courses in research methods, statistics, and criminal justice (police, corrections, criminological theory).

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 individually with the doctoral coordinator. The meeting will involve performance in the program. 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 and Criminology

- CRJU 8312 - Secondary Data Set Management

- CRJU 8315 - Multivariate Statistics

- CRJU 8314 - Mixed Methodology

- 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:

Students my also take courses from CRJU 7393, Special Topics to fulfill this requirement.

- CRJU 8310 - Doctoral Proseminar

- CRJU 7300 - Criminological Theory

- CRJU 8313 - Advanced Criminological Theory

- CRJU 8321 - Teaching Practicum

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 the 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:

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.

- CRJU 8393 - Dissertation (12 hours)

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.

School of Social Work

Master of Social Work
Social Work, M.S.W.

The mission of the graduate program of the School of Social Work, building on a strong generalist foundation, is to prepare graduates for leadership roles in clinical practice and in management and community practice within the social welfare system in Arkansas. Our commitment is to discover and disseminate knowledge, to embrace diversity, to serve our communities and organizations, and to eliminate the barriers that oppressed and vulnerable people face.

The Master of Social Work (M.S.W.) program is offered at UA Little Rock for main campus students and online for those enrolled in the online program. After completion of the foundation year, students enrolled in the main campus program choose one of two concentrations for their second academic year of study: advanced direct practice (ADP) or management and community practice (MCP) while students enrolled in the online campus program must choose the advanced direct practice concentration. 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. The foundation year internship consists of approximately two days per week for the duration of the academic year while the concentration year internship consists of approximately three days per week during the academic year. Night and weekend internships are NOT available. 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. Https://ualr.edu/socialwork/

ADMISSION REQUIREMENTS

- Baccalaureate degree with a liberal arts perspective from an accredited college or university.

- Overall GPA of 3.0 is required.

- Narrative statement of professional orientation. (format included in the application packet)

- 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 3.5.

- Must have a 3.5 GPA in last 60 hours of undergraduate studies.

- Degree must have been awarded within the last five years.

- Must submit a recommendation by the BSW level internship instructor.

- 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 may be available. 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 should be attached.

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.

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. Through contact with clients, students develop the requisite skills for social work practice. Foundation students must be enrolled in or have completed all foundation requirements while enrolled in their foundation internship placement. Concentration students must be enrolled in their concentration year courses while enrolled in concentration year internship. All internships and agencies are selected by the internship coordinators; students are not expected to find their own internships.

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 and/or coordinate services for individuals, families, and groups. Agencies may provide services to people affected by abuse, physical or learning disabilities, long-term or terminal illness, drug or alcohol abuse, psychological disorders, juvenile delinquency, teen pregnancy, economic distress, or challenges.

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 provide opportunities to apply classroom learning to direct practice with clients.

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. This concentration is not open to students enrolled in the online program. Online students who want to enroll in this concentration must request a change of campus from the MSW Program Coordinator.

PROGRAM OPTIONS

There are several different options available to students pursuing an MSW degree.

MAIN CAMPUS PROGRAM

Students who enroll at the Main campus are expected to take classes in a synchronous format and attend classes on campus. Students who attend the Main campus may complete the program as either part-time students who complete the program in three years or as full-time students who complete the program in two years. Students who enroll in the Main Campus program may pursue either the Advanced Direct Practice (clinical) or Management and Community Practice (macro) concentration.

ONLINE CAMPUS PROGRAM

Students who enroll in the Online campus program are expected to take classes online; most classes are offered in an asynchronous format although some classes may be offered synchronously. Students who attend the Online campus may complete the program as either part-time students who complete the program in three years or as full-time students who complete the program in two years. Although the foundation year curriculum is the same as the Main campus curriculum, Online campus students may only pursue the Advanced Direct Practice concentration. Online students who wish to pursue the Management and Community Practice concentration must request a move to the Main campus from the MSW Program Coordinator. Online students must complete their internships in-person in settings that have been selected by the internship coordinator.

ADVANCED STANDING PROGRAM

This program allows qualified students who have earned a Bachelor of Social Work (BSW) degree from an institution accredited by the Council on Social Work Education during the previous five 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. Students may complete the program on the Main or Online campus, however Online campus students may only pursue the Advanced Direct Practice concentration.

GRADUATION REQUIREMENTS

- Satisfactory completion of approved program of study.
- At least 3.0 GPA in all courses and a grade of CR in all internship courses.
- Faculty recommendation for degree

Graduate Certificate
Gerontology
Graduate Certificate

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.

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.

THIS PROGRAM IS NOT OFFERED IN-PERSON, ONLY ONLINE.

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.

SPECIAL CONDITIONAL ADMISSION

In a small percentage of applications, students with the following criteria may be accepted into the program as special conditional admissions:

- a GPA between 2.0 and 2.69,

- at least 5 years of work in the field, and/or passage of select rigorous professional certification/licensing exams such as, but not limited to, the LSW or LMSW in social work or some nursing exams.

- A resume and personal interview

Once accepted, students must maintain a 3.0 GPA to remain in the program. The decision of the Gerontology Program, the School of Social Work Admission Committee, and/or the program coordinator is final.

Gerontology (GERO) courses are open to all students with graduate standing as electives or as part of the 18 hour certificate in Gerontology.

Program Requirements

The certificate program requires the 9 core credit hours in Gerontology. The certificate requires an additional 9 hours of approved elective credit for a total of 18 credit hours.

The certificate requires 18 graduate-level hours.

The following courses (9 hours) are required:

- GERO 5310 - Social Gerontology

  or

- SOWK 5310 - Social Gerontology
- GERO 7325 - Health and Biology of Aging

  or

- SOWK 7325 - Health and Biology of Aging
- GERO 7321 - Aging and Social Policy

  or

- SOWK 7321 - Aging and Social Policy

Certificate students choose 9 hours of elective credit.

Approved elective courses include:

- GERO 5315 - Interdisciplinary Health Care of the Elderly
- GERO 5336 - Social Aspects of Death and Dying

  or

- SOWK 5336 - Social Aspects of Death and Dying

- GERO 5337 - Adult Development and Aging

  or

- SOWK 5337 - Adult Development and Aging

- GERO 7322 - Assessment and Care Management of the Older Adult

- GERO 7323 - Impact of Illness and Disability

  or

- SOWK 7323 - Impact of Illness and Disability

- SOWK 7327 - Grief, Loss, and Social Work Practice

- SOWK 8346 - Family in Late Life

- SOWK 5330 - Animal Assisted Therapy

- SOWK 8311 - Family Life Cycle

Graduation Requirements

Cumulative GPA of at least 3.0 on an approved program of study as outlined above.

Donaghey College of Science, Technology, Engineering, and Mathematics
EIT Building, Room 621, (501) 569-3333, (501) 569-8002 (fax)

- Professor Lawrence Whitman, Dean

- Professor Jeffrey Connelly, Associate Dean

The mission of the Donaghey College of Science, Technology, Engineering, and Mathematics is to educate the next generation of STEM and technical professionals in the skills and knowledge base necessary to create and manage science and 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 Computer and Information Science or Engineering Science and Systems. The College participates in the M.S.-Ph.D. program in Bioinformatics offered jointly with the University of Arkansas for Medical Sciences. Additional graduate programs in the college include an M.S. degree in Computer Science, a graduate certificate program in Estimating Management, an M.S. degree in Construction Management, a graduate certificate program and an M.S. degree in Information Quality, an M.S. degree in Information Science, as well as a graduate certificate program in Data Science. It also offers 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 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.

Department of Chemistry
Master of Arts

Chemistry, M.A.

Chemistry

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 Advanced Analytical Chemistry, CHEM 7340 Advanced Inorganic Chemistry, CHEM 7350 Organic Reaction Mechanisms, CHEM 7370 Physical Principles of Chemical Reactivity), as determined by the department's graduate programs committee.

The master of science degree requires CHEM 8100-CHEM 8400 Thesis Research and CHEM 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).

Master of Science Chemistry, M.S.

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.

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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).

Department of Biology

Master of Arts
Biology, M.A.

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

Limited 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. Assistantships are competitive and dependent on availability of funds and faculty interest.

Program Requirements

Core Courses
Students will complete the following 13 credit hours:

- BIOL 5415 - Biometry
- BIOL 7310 - Experimental Design in Biology
- RHET 5302 - 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)
  or
- RHET 5304 - Technical Style and Editing (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)
  or
- RHET 5306 - Writing for Business and Government (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)
  or
- RHET 5315 - Advanced Persuasive 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)
  or
- RHET 5317 - The Personal Essay (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 program. 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, BIOL 5422 Human Physiology
- Genetics: ASCI 7385 Concepts in Genetic Analysis, ASCI 7387 Genetics
- Biochemistry and molecular biology: BIOL 5418 Biotechnology, 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.

Master of Science
Biology, M.S.
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

Limited 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. Assistantships are competitive and dependent on availability of funds and faculty interest.

Program Requirements

Core Courses

Students will complete the following 13 credit hours:

- BIOL 5415 - Biometry

- BIOL 7310 - Experimental Design in Biology
- RHET 5302 - 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)

  or
- RHET 5304 - Technical Style and Editing (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)

  or
- RHET 5306 - Writing for Business and Government (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)

  or
- RHET 5315 - Advanced Persuasive 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)

  or
- RHET 5317 - The Personal Essay (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 program. 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, BIOL 5422 Human Physiology
- Genetics: ASCI 7385 Concepts in Genetic Analysis, ASCI 7387 Genetics
- Biochemistry and molecular biology: BIOL 5418 Biotechnology, 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.

Department of Applied Science

Master of Science

Applied Science, Non-Thesis Option Alternative 1, M.S.

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.

- 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 DCSTEM 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 lecture courses not from Applied Science disciplines (applied science, biology, chemistry, geology, mathematics, and physics) must require prior approval from the Graduate coordinator. 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 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 DCSTEM. 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 DCSTEM 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, ASCI 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, ASCI 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

- Successful completion of Comprehensive Exam

- Successful completion of Project Presentation and Report

Minimum Graded Course Credits

18 credits

A maximum of six independent study (ASCI 7X89) and/or special topics (5399, ASCI 7399) may be applied towards the M.S. requirement.

Thesis/Dissertation or Project Credits

12 Doctoral credits (9X00)

Thesis Proposal and Defense

Not applicable

Comprehensive Exam

Must pass three candidacy subjects in doctoral candidacy exam

Project Presentation and Report

Successful defense of the doctoral proposal.

Published conference paper or journal; student as primary or corresponding author

Applied Science, Non-Thesis Option Alternative 2, M.S.

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 DCSTEM 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 lecture courses not from Applied Science disciplines (applied science, biology, chemistry, geology, mathematics, and physics) must require prior approval from the Graduate coordinator. 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 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 DCSTEM. 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 DCSTEM 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, ASCI 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, ASCI 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

Minimum Graded Course Credits

18 credits

A maximum of three independent study (ASCI 7X89) or special topics (5399, ASCI 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.

Thesis/Dissertation or Project Credits

Six credits of independent study (ASCI 7X89) for project (see below)

Thesis Proposal and Defense

Not applicable

Comprehensive Exam

Must pass three candidacy subjects in doctoral candidacy exam

Project Presentation and Report

Complete project by means of six credits of independent study (ASCI 7X89), make project presentation and submit report.

Applied Science, Non-Thesis Option Alternative 3, M.S.

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 DCSTEM 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.

COURSE WORK

The Master of Science degree requires a minimum of 30 credit hours beyond the baccalaureate degree. The lecture courses not from Applied Science disciplines (applied science, biology, chemistry, geology, mathematics, and physics) must require prior approval from the Graduate coordinator. 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 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 DCSTEM. 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 DCSTEM 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, ASCI 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, ASCI 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

Minimum Graded Course Credits

18 credits

A maximum of three independent study (ASCI 7X89) or special topics credits (5399, ASCI 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.

Thesis/Dissertation or Project Credits

Six credits of independent study (ASCI 7X89) for project (see below)

Thesis Proposal and Defense

Not applicable

Comprehensive Exam

Oral exam administered by student's advisory committee

Project Presentation and Report

Complete project by means of six credits of independent study (ASCI 7X89), make project presentation and submit report.

Applied Science, Thesis Option, M.S.

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 DCSTEM 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.

COURSE WORK

The Master of Science degree requires a minimum of 30 credit hours beyond the baccalaureate degree. The lecture courses not from Applied Science disciplines (applied science, biology, chemistry, geology, mathematics, and physics) must require prior approval from the Graduate coordinator. 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 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 DCSTEM. 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 DCSTEM 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, ASCI 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, ASCI 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

Minimum Graded Course Credits

18 credits

A maximum of six independent study (ASCI 7X89) and/or special topics course (5399, ASCI 7399) may be applied towards the M.S. requirement.

Thesis/Dissertation or Project Credits

12 master's credits (ASCI 8X00)

Thesis Proposal and Defense

Required

Comprehensive Exam

Not applicable

Project Presentation and Report

Not applicable

Doctor of Philosophy

Applied Science, Applied Biosciences Emphasis, Ph.D.

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 UALR 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.

APPLIED MATHEMATICS AND STATISTICS

The applied mathematics and statistics emphasis apply 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, ASCI 7245, or ASCI 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 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.

DOCTORAL ADVISOR

A student's dissertation advisor must be a UA Little Rock Full Graduate Faculty that actively participates 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 a minimum of five members, including the student's doctoral advisor who will serve as the committee chair. A minimum of four of the committee members, including the chair, must be UA Little Rock Full Graduate Faculty. A minimum of three of the committee members must be affiliated with the department that hosts the emphasis area the student is affiliated with. All committee members must be either full or affiliate UA Little Rock Graduate Faculty. The emphasis area Graduate Coordinator must approve the committee constituency. When a student proposes his/her dissertation committee to the Graduate Coordinator, they need to provide a brief written justification explaining how each committee member's expertise can enhance the student's dissertation research. 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 by the end of the student's seventh semester and at least two years prior to their 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 UA Little Rock 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 minimum GPA of 3.0
- Successful completion of candidacy examinations
- Successful completion of proposal and oral defense
- Successful completion of dissertation and oral defense
- Successful completion of the writing, research ethics course, laboratory rotation, and seminar requirements

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.

Applied Biosciences

- Organism Functions
- Cellular Function
- Genetics
- Biochemistry and Molecular Biology
- Biological Modeling and Analysis
- Ecological Interaction
- Discipline Specific Applications

Applied Science, Applied Chemistry Emphasis, Ph.D.

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 UALR 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.

APPLIED MATHEMATICS AND STATISTICS

The applied mathematics and statistics 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, ASCI 7245, or ASCI 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 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.

DOCTORAL ADVISOR

A student's dissertation advisor must be a UA Little Rock Full Graduate Faculty that actively participates 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 a minimum of five members, including the student's doctoral advisor who will serve as the committee chair. A minimum of four of the committee members, including the chair, must be UA Little Rock Full Graduate Faculty. A minimum of three of the committee members must be affiliated with the department that hosts the emphasis area the student is affiliated with. All committee members must be either full or affiliate UA Little Rock Graduate Faculty. The emphasis area Graduate Coordinator must approve the committee constituency. When a student proposes his/her dissertation committee to the Graduate Coordinator, they need to provide a brief written justification explaining how each committee member's expertise can enhance the student's dissertation research. 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 by the end of the student's seventh semester and at least two years prior to their 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 UA Little Rock 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 minimum GPA of 3.0

- Successful completion of candidacy examinations
- Successful completion of proposal and oral defense
- Successful completion of dissertation and oral defense
- Successful completion of the writing, research ethics course, laboratory rotation, and seminar requirements

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.

Applied Chemistry

- Analytical Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Physical Chemistry
- Discipline Specific Applications

Applied Science, Applied Mathematics and Statistics, Ph.D.

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 UALR 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.

APPLIED MATHEMATICS AND STATISTICS

The applied mathematics and statistics emphasis apply 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, ASCI 7245, or ASCI 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

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advisor who will serve as the committee chair. A minimum of four of the committee members, including the chair, must be UA Little Rock Full Graduate Faculty. A minimum of three of the committee members must be affiliated with the department that hosts the emphasis area the student is affiliated with. All committee members must be either full or affiliate UA Little Rock Graduate Faculty. The emphasis area Graduate Coordinator must approve the committee constituency. When a student proposes his/her dissertation committee to the Graduate Coordinator, they need to provide a brief written justification explaining how each committee member's expertise can enhance the student's dissertation research. 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).

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Applied Mathematics and Statistics
Applied Statistics

- STAT 7341 - Advanced Statistical Methods II

  or

- STAT 7353 - Linear/Non-Linear Regression

Computational Statistics

- STAT 7343 - Programming in SAS

  or

- STAT 7354 - Experimental Design

Differential Equations

- MATH 7322 - Advanced Differential Equations

  or

- MATH 7325 - Partial Differential Equations

Linear Algebra

- MATH 7311 - Advanced Linear Algebra

  or

- MATH 7312 - Computational Linear Algebra

Mathematical Statistics

- MATH 7351 - Mathematical Statistics II

The Theory of Numerical Methods

- MATH 7324 - Advanced Numerical Analysis II

  or

- MATH 7330 - Theory of Finite Element Methods

Discipline Specific Applications

- any CALS course with a regular course number may be chosen with the approval of the advisor

Applied Science, Applied Physics Emphasis, Ph.D.

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.

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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.

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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).

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LABORATORY ROTATIONS

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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.

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TRANSFER OF CREDIT

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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.

DOCTORAL ADVISOR

A student's dissertation advisor must be a UA Little Rock Full Graduate Faculty that actively participates 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

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The dissertation subject is selected by the student and the advisory committee by the end of the student's seventh semester and at least two years prior to their 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 UA Little Rock 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 minimum GPA of 3.0

- Successful completion of candidacy examinations

- Successful completion of proposal and oral defense

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- Successful completion of the writing, research ethics course, laboratory rotation, and seminar requirements

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.

Applied Physics

- Mechanics

- Electricity and Magnetism

- Quantum Mechanics

- Statistical Thermodynamics

- Elastic Wave Theory

- Potential Theory

- Material Physics

- Astrophysics

- Discipline Specific Applications

Department of Computer Science

Master of Science
Computer Science, M.S.

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 as well as practical foundation for careers in computer science.

The curriculum consists of two parts: a core curriculum and specialization course work. Core curriculum refers to required courses that provide students with fundamental knowledge and extending their skill set. Building on the core foundation, the specialization course work allows students the opportunity to select elective courses to acquire in-depth knowledge and skills in the 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 or project.

The program is accessible to day and evening students and lends itself to full-time as well as part-time study.
Additional information is available at the 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 (on a 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 admission or 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 - Algorithms

- CPSC 2482 - Computer Organization

- CPSC 3369 - Introduction to Computer Architecture and Assembly Language

- CPSC 3375 - Database Concepts or CPSC 4373 - Software Engineering

- CPSC 3380 - Operating Systems Concepts

- CPSC 3383 - Programming Languages

- 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 - Special Topics. 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 (5) specialization classes (three (3) if the thesis option is selected) from the department's graduate-level courses. Students are strongly encouraged to select courses under the guidance of their graduate advisor(s) with the goal of in-depth exploration of a particular area in computer science. Students may take a maximum of two (2) 5000-level courses as part of their specialization course work. Additionally, the total number of special topic or independent study classes cannot exceed four (4). Substitution of up to two graduate electives from other disciplines (in particular applied science, systems engineering, information science, and mathematics) for specialization course work is at the discretion of the Computer Science Graduate Coordinator.

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:

- Graduate Project: 33 credit hours, consisting of 30 hours of course work plus three (3) credit hours of CPSC 7398 - Graduate Project.

- Graduate Thesis: 30 credit hours, consisting of 24 hours of course work plus six credit (6) hours of Thesis (CPSC 8100 - Thesis - CPSC 8600 - Thesis).

Students choosing the project or thesis options must complete the core curriculum prior to enrolling in CPSC 7398 - Graduate Project or CPSC 8100 - Thesis - CPSC 8600 - Thesis. Additionally, students must form a Project Committee or Thesis Committee. Such a committee must have at least two members, including the advisor, from the Computer-Science Department. A committee can have at most one member from other departments. Following the recommendation of the Project Committee or Thesis Committee, a student must schedule an oral proposal presentation as well as an oral defense presentation for the graduate project or thesis.

Performance Requirements

- 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).

- Students receiving a grade of C or lower 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(s)

- Courses with grades B or better may not be repeated.

Academic Advising

Each semester, academic advising is **required** for every student prior to course registration. A copy of the list of approved courses must be filed with the Graduate School.

Graduate Assistantships

A limited number of graduate assistantships are available. Please, 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 the section on **Program Options.**

Doctor of Philosophy

Computer and Information Sciences, All Tracks, Ph.D.

The Computer and Information Sciences (CIS) (formerly Integrated Computing) doctoral program is housed in the Donaghey College of Engineering and Information Technology. Faculty, curriculum, and resources for this program come from two departments: Computer Science and Information Science.

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 track areas are offered:

COMPUTER SCIENCE

The mission of the Computer Science track of the Ph.D. is to provide high quality research and educational experiences by maintaining a balance between theoretical and experimental aspects of computer science. The primary focus of the Ph.D. track is development and demonstration of research skills in all aspects of computing. The track also provides with the opportunity to concentrate on a specific subject area within a discipline. With information technology extending its reach into more and more application domains, students are increasingly interested in focused education that may draw from several areas. We have designed a track that allows you to obtain an in-depth education in specific aspects of computer science and related fields. The track encourages interdisciplinary research among faculty, students, and research associates. It is the unique interdisciplinary combination that distinguishes our Ph.D. track. The department facilitates a collegial atmosphere that is conducive to intellectual and scholarly pursuits of faculty and students.

INFORMATION SCIENCE

Information Science makes sense of the data that people gather through information technology. The Information Science track of the Ph.D. in CIS focuses on the theory, applications, technologies, and systems that classify, manipulate, store, retrieve, and disseminate information. This track seeks to expand human and technical capabilities in a world where information is of central importance. As with the other tracks, graduates will have a Ph.D. in CIS, but with an Information Science track. Graduates in this track will most likely focus their doctoral research on data, information, and knowledge, how to manage and manipulate it, and what to do with it, rather than on developing novel hardware or tools for software development. They will become deeply immersed in the knowledge, skills, and technologies needed to design and develop systems for better storage, retrieval, and use of information. Graduates will be equipped to go on to challenging information technology careers in business, academia, and government. The Information Science track is available both on-campus and online through UA Little Rock Online (https://ualr.edu/online) with only three campus visits required for Candidacy Examination, Oral Research Proposal, and Oral Dissertation Defense.

INFORMATION QUALITY

Established as part of the Information Science Department in 2006 by the UALR Donaghey College of Engineering and Information Technology (EIT) in collaboration with the Massachusetts Institute of Technology Chief Data Officer and Information Quality (MIT CDOIQ) Program, the UALR Information Quality track is dedicated to providing a state-of-the-art curriculum for information quality education, contributing new ideas to the information quality body of knowledge, and establishing partnerships with the industry, government, and professional societies. Information quality (IQ) is an emerging discipline concerned with maximizing the value of an organization's information assets while also minimizing risk, and assuring that the information products produced by the organization will create value for the customers who use them. Graduates of the track are prepared to pursue a variety of industry careers such as Chief Data Officer, Leader for Enterprise Data Strategy and Innovation, and Director of Data Governance, as well as research and teaching roles in higher education. The Information Quality track is available both on-campus and online through UA Little Rock Online (https://ualr.edu/online) with only three campus visits required for Candidacy Examination, Oral Research Proposal, and Oral Dissertation Defense.

ADMISSION REQUIREMENTS

Applicants for the Computer and Information Sciences program must meet the requirements of the UALR Graduate School in addition to the following criteria:

- 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 over undergraduate GPA of at least 3.0 (4.0 scale) for their last 60 credit hours.

- GRE test scores taken with five years of application. The desired combined quantitative and verbal score 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 and Information Science tracks have an additional minimum score requirement of 156 for the 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. 3.0 or above on a 6.0 scale) or through samples of their written work.

- Three (3) 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

- Resume 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 adherence to the admission criteria stated above. The CIS Steering Committee will evaluate the compatibility between the applicant's background, research interests, and communication skills vis-a-vis the doctoral program when making admission decisions and may decline to recommend for an admission an otherwise qualified application based on a lack of fit with the program.

CONDITIONAL ADMISSION

The CIS 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 outlined by the specified time frame to be admitted fully (e.g. student may be required to maintain a B or higher in their first 9 hours in the program). The performance of such students will be evaluated 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 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 12 credit hours of 5000-level courses that can be used toward this requirement. These 33 credit hours of coursework must include 6 credit hours of General Core classes, 12 credit hours of Primary Track courses, a minimum of 12 credit of electives, and 3 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 graduate program 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:

- CPSC 7311 Software Engineering, for Computer Science track

- CPSC 7382 Systems Analysis and Design, or IFSC 7310 Information Systems Analysis, for Information Quality and Information Science tracks.

- IFSC 7321 Information Science Theory and Practice, for all tracks

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 3 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 CIS 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 CIS Steering Committee.

SEMINAR REQUIREMENT

All Ph.D. students are required to register for the 1 credit hour Integrated Computing Seminar for 3 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 track 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

Graduate credits may be granted for equivalent course work from other institutions, exclusive of thesis or other exit project credits, with approval of the appropriate program coordinator and the Graduate School dean. Such credit must be no more than 5 years old and must have a letter grade of B or higher. Students interested in requesting a credit transfer should discuss the request with their doctoral adviser and appropriate graduate program coordinator.

The request must also be approved by the graduate program 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 with be counted toward the degree based upon the applicability of the courses selected for dissertation work and the student's educational goals.

RESEARCH ADVISER

Each student will choose a faculty member to be his or her mentor through the doctoral program. Students should formally declare a research adviser preferably at the end of the first semester but not later than the second semester. New students will be advised initially by the program coordinator of the student's chosen track area. Through interactions with faculty, most students should have selected a doctoral adviser to guide them through their course work, preparation for the qualifying exams, and dissertation process by the end of their first two semesters.

EXAMINATION COMMITTEES

The research pursued towards the Ph.D. degree is monitored by two committees: 1) Qualifying Examination Committee (QEC) and 2) Doctoral Examination Committee (DEC). The role of these committees is to monitor and help direct a student's academic and research program. The QEC comprimises three (3) faculty members in the program, not to include the student's research advisor. The QEC members are nominated by the student and approved by the Program Coordinator.

The DEC should be formed by the student in consultation with his or her research adviser after the student has successfully completed his or her Qualifying Examination. The DEC shall comprise a minimum of 4 members with the student's dissertation adviser serving as the committee chair. The chair and at least 1 other member must hold Full Graduate Faculty Status, hold a

doctoral degree, and be a full-time faculty member of either the Department of Computer Science or the Department of Information Science. The third member must also hold Full Graduate Faculty Status and a doctoral degree, but can be a full-time faculty member of any UA Little Rock college, school, or department. The fourth member(s) can be anyone holding graduate faculty status approved for dissertation committee service including Affiliate Graduate Faculty Status. The graduate program coordinator must approve and document the DEC's constituency after its initial review by the CIS Steering Committee. The student will make an oral defense of his or her dissertation to the entire committee, after which the committee will vote pass or fail. The student will pass the oral defense if a majority of the entire committee votes to pass. In the case of a tie vot e, the chair of the department in which the student is enrolled will cast the deciding vote regardless of whether the chair is, or is not, a member of the student's DEC. If a student fails the oral defense, the student's advisor may reschedule a second oral defense. If a student fails the second defense, the student will be dismissed from the program.

QUALIFYING EXAMINATION

The purpose of the qualifying examination is to determine whether the student is ready to pursue research in his/her area of interest and possesses the competency and knowledge desired of a doctoral candidate. Only students, who have at least 4 semesters of graduate work completed, including the core courses, are allowed to take the Qualifying Examination a maximum of 2 times. It is an oral examination conducted by the Qualifying Examination Committee (QEC). The oral examination is considered to be passed if all members of the QEC vote "yes" on the competency and knowledge level. Note: In any discrepancy the appeal process of the university holds.

DISSERTATION PROPOSAL

Following the completion of the core courses and Qualifying Examination, candidates will write a dissertation proposal for their DEC detailing their intended research plan and objectives. Candidates must make an oral defense of their proposal to their DEC. Candidates should allow for ample time between the dissertation proposal and the dissertation defense (typically one to two years depending on the student's background). The dissertation subject must be a scholarly contribution to a major field of computer and information sciences in the student's track area, consisting of new important knowledge or a major modification, amplification, or interpretation of existing significant knowledge.

The candidate's dissertation proposal must be given to the doctoral advisory committee 2 weeks in advance of meeting with the committee. The candidate must orally defend the rationale and research procedures for the proposed doctoral dissertation to fulfill the qualifying exam requirements. Candidates who fail (e.g. not receiving a unanimous pass) 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 graduate program 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. In the public session, the candidates will make a presentation of their research results. The second part of the dissertation defense will be a closed session during which the candidate will be examined by the DEC in private. The dissertation defense 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 dissertation defense, the doctoral advisory committee will vote to either pass or fail the student. If one negative vote is received from committee members, it is considered a failure of the exam. Supervisory of examining committee report forms must be filed at the conclusion of the defense with the graduate program 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 qualifying examination orally.

- Successful completion of proposal and oral defense.

- Successful completion of dissertation and oral defense.

- Successful completion of seminar and ethics requirements.

ADDITIONAL PROGRAM REQUIREMENTS:

- A maximum of 2 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 1 independent study course (3 credits) can be applied toward the Ph.D. degree.

- Only 2 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.
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REQUIRED COURSES FOR COMPUTER AND INFORMATION SCIENCES EMPHASES

A list of courses used in the various tracks of the CIS 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.

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 9 credit hours, 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 assistantships, the online application process, and other financial assistance opportunities, visit the CIS website at ualr.edu/eit. A student supported by a graduate assistantship must be a registered full-time student taking at least 9 credit hours during each 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 should exceed 550 (paper-based test) or 213 (computer-based test) or 79 (internet-based test). Applicants with scores close to the required score for their test format may be admitted provisionally upon the recommendation of the CIS Steering Committee to the dean of the 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).

Computer Science Track Core

- CPSC 7311 - Software Engineering

- IFSC 7321 - Information Science: Principles and Theory

- CPSC 7325 - Software Security Assessment

- CPSC 7331 - Computer Architecture

  or

- SYEN 5331 - Advanced Computer Architecture

- CPSC 7341 - Telecommunications and Networking

- CPSC 7385 - Analysis of Algorithms

Information Science Track Core

- IFSC 7310 - Information Systems Analysis

- IFSC 7321 - Information Science: Principles and Theory

- IFSC 7320 - Database Systems

- IFSC 5345 - Information Visualization

- IFSC 7360 - Data Protection and Privacy

- IFSC 7370 - Data Science and Technologies

Information Quality Track Core

- IFSC 7310 - Information Systems Analysis

- IFSC 7321 - Information Science: Principles and Theory

- IFSC 7320 - Database Systems

- INFQ 7303 - Principles of Information Quality

- INFQ 7322 - Information Quality Theory
- INFQ 7367 - Information Quality Policy and Strategy

Computer and Information Sciences, Computer Science Track, Ph.D.

Computer and Information Sciences

The Computer and Information Sciences (CIS) (formerly Integrated Computing) doctoral program is housed in the Donaghey College of Engineering and Information Technology. Faculty, curriculum, and resources for this program come from two departments: Computer Science and Information Science.

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 track areas are offered:

ADMISSION REQUIREMENTS

Applicants for the Computer and Information Sciences program must meet the requirements of the UALR Graduate School in addition to the following criteria:

- 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 over undergraduate GPA of at least 3.0 (4.0 scale) for their last 60 credit hours.

- GRE test scores taken with five years of application. The desired combined quantitative and verbal score 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 and Information Science tracks have an additional minimum score requirement of 156 for the 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. 3.0 or above on a 6.0 scale) or through samples of their written work.

- Three (3) 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

- Resume 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 adherence to the admission criteria stated above. The CIS Steering Committee will evaluate the compatibility between the applicant's background, research interests, and communication skills vis-a-vis the doctoral program when making admission decisions and may decline to recommend for an admission an otherwise qualified application based on a lack of fit with the program.

CONDITIONAL ADMISSION

The CIS 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 outlined

by the specified time frame to be admitted fully (e.g. student may be required to maintain a B or higher in their first 9 hours in the program). The performance of such students will be evaluated 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 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 12 credit hours of 5000-level courses that can be used toward this requirement. These 33 credit hours of coursework must include 6 credit hours of General Core classes, 12 credit hours of Primary Track courses, a minimum of 12 credit of electives, and 3 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 graduate program 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:

- CPSC 7311 - Software Engineering for Computer Science track

- CPSC 7382 Systems Analysis and Design
  or

- IFSC 7310 - Information Systems Analysis for Information Quality and Information Science tracks

- IFSC 7321 - Information Science: Principles and Theory for all tracks

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 3 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 CIS 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 CIS Steering Committee.

SEMINAR REQUIREMENT

All Ph.D. students are required to register for the 1 credit hour Integrated Computing Seminar for 3 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 track 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

Graduate credits may be granted for equivalent course work from other institutions, exclusive of thesis or other exit project credits, with approval of the appropriate program coordinator and the Graduate School dean. Such credit must be no more than 5 years old and must have a letter grade of B or higher. Students interested in requesting a credit transfer should discuss the request with their doctoral adviser and appropriate graduate program coordinator

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The request must also be approved by the graduate program 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 with be counted toward the degree based upon the applicability of the courses selected for dissertation work and the student's educational goals.

RESEARCH ADVISER

Each student will choose a faculty member to be his or her mentor through the doctoral program. Students should formally declare a research adviser preferably at the end of the first semester but not later than the second semester. New students will be advised initially by the program coordinator of the student's chosen track area. Through interactions with faculty, most students should have selected a doctoral adviser to guide them through their course work, preparation for the qualifying exams, and dissertation process by the end of their first two semesters.

EXAMINATION COMMITTEES

The research pursued towards the Ph.D. degree is monitored by two committees: 1) Qualifying Examination Committee (QEC) and 2) Doctoral Examination Committee (DEC). The role of these committees is to monitor and help direct a student's academic and research program. The QEC should be formed by the student from the faculty members in the program. For more information, please refer to the Qualifying Examination Guideline.

The DEC should be formed by the student in consultation with his or her research adviser after the student has successfully completed his or her Qualifying Examination. The DEC shall comprise a minimum of 4 members with the student's dissertation adviser serving as the committee chair. The chair and at least 1 other member must hold Full Graduate Faculty Status, hold a doctoral degree, and be a full-time faculty member of either the Department of Computer Science or the Department of Information Science. The third member must also hold Full Graduate Faculty Status and a doctoral degree, but can be a full-time faculty member of any UA Little Rock college, school, or department. The fourth member(s) can be anyone holding graduate faculty status approved for dissertation committee service including Affiliate Graduate Faculty Status. The graduate program coordinator must approve and document the DEC's constituency after its initial review by the CIS Steering Committee. The student will make an oral defense of his or her dissertation to the entire committee, after which the committee will vote pass or fail. The student will pass the oral defense if a majority of the entire committee votes to pass. In the case of a tie vote, the chair of the department in which the student is enrolled will cast the deciding vote regardless of whether the chair is, or is not, a member of the student's DEC. If a student fails the oral defense, the student's advisor may reschedule a second oral defense. If a student fails the second defense, the student will be dismissed from the program.

QUALIFYING EXAMINATION

The purpose of the qualifying examination is to determine whether the student is ready to pursue research in his/her area of interest and possesses the competency and knowledge desired of a doctoral candidate. Only students, who have at least 4 semesters of graduate work completed, including the core courses, are allowed to take the Qualifying Examination a maximum of 2 times. It is an oral examination conducted by the Qualifying Examination Committee (QEC). The oral examination is considered to be passed if all members of the QEC vote "yes" on the competency and knowledge level. Note: In any discrepancy the appeal process of the university holds. For more information, please refer to the Qualifying Examination Guideline (QEG).

DISSERTATION PROPOSAL

Following the completion of the core courses and Qualifying Examination, candidates will write a dissertation proposal for their DEC detailing their intended research plan and objectives in National Science Foundation (NSF) format. Candidates must make an oral defense of their proposal to their PEC. Candidates should allow for ample time between the dissertation proposal and the dissertation defense (typically one to two years depending on the student's background). The dissertation subject must be a scholarly contribution to a major field of computer and information sciences in the student's track area, consisting of new important knowledge or a major modification, amplification, or interpretation of existing significant knowledge.

The candidate's dissertation proposal must be given to the doctoral advisory committee 2 weeks in advance of meeting with the committee. The candidate must orally defend the rationale and research procedures for the proposed doctoral dissertation to fulfill the qualifying exam requirements. The proposal presentation should be advertised publicly at least 2 weeks prior to the presentation. Candidates who fail (e.g. not receiving a unanimous pass) 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 graduate program coordinator. For more information, please refer to the Proposal Examination Guideline (PEG).

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. In the public session, the candidates will make a presentation of their research results. The second part of the dissertation defense will be a closed session during which the candidate will be examined by the DEC in private. The dissertation defense 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 dissertation defense, the doctoral advisory committee will vote to either pass or fail the student. If one negative vote is received from committee members, it is considered a failure of the exam. Supervisory of examining committee report forms must be filed at the conclusion of the defense with the graduate program 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 qualifying examination orally.

- Successful completion of proposal and oral defense.

- Successful completion of dissertation and oral defense.

- Successful completion of seminar and ethics requirements.

ADDITIONAL PROGRAM REQUIREMENTS:

- A maximum of 2 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 1 independent study course (3 credits) can be applied toward the Ph.D. degree.

- Only 2 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. Students may be required to take additional courses to gain the necessary prerequisite knowledge.

REQUIRED COURSES FOR COMPUTER AND INFORMATION SCIENCES EMPHASES

A list of courses used in the various tracks of the CIS 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.

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 9 credit hours, 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 assistantships, the online application process, and other financial assistance opportunities, visit the CIS website at ualr.edu/eit. A student supported by a graduate assistantship must be a registered full-time student taking at least 9 credit hours during each 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 should exceed 550 (paper-based test) or 213 (computer-based test) or 79 (internet-based test). Applicants with scores close to the required score for their test format may be admitted provisionally upon the recommendation of the CIS Steering Committee to the dean of the 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).

GENERAL CORE COURSE DESCRIPTIONS

The notation used below should be taken into consideration when selecting course work.
*Required for Computer Science students
**Required for Information Science or Information Quality students
+Required Core Courses

- CPSC 7382 - Systems Analysis and Design **

- IFSC 7310 - Information Systems Analysis

- IFSC 7321 - Information Science: Principles and Theory

Computer Science Track

The mission of the Computer Science track of the Ph.D. is to provide high quality research and educational experiences by maintaining a balance between theoretical and experimental aspects of computer science. The primary focus of the Ph.D. track

is development and demonstration of research skills in all aspects of computing. The track also provides with the opportunity to concentrate on a specific subject area within a discipline. With information technology extending its reach into more and more application domains, students are increasingly interested in focused education that may draw from several areas. We have designed a track that allows you to obtain an in-depth education in specific aspects of computer science and related fields. The track encourages interdisciplinary research among faculty, students, and research associates. It is the unique interdisciplinary combination that distinguishes our Ph.D. track. The department facilitates a collegial atmosphere that is conducive to intellectual and scholarly pursuits of faculty and students.

- CPSC 7311 - Software Engineering +
- CPSC 7321 - Operating Systems *

- CPSC 7331 - Computer Architecture *

  or

- SYEN 5331 - Advanced Computer Architecture *

- CPSC 7341 - Telecommunications and Networking *
- CPSC 7343 - Sensor Networks
- CPSC 7344 - Cloud Computing
- CPSC 7382 - Systems Analysis and Design **
- CPSC 7385 - Analysis of Algorithms *

Computer and Information Sciences, Information Quality Track, Ph.D.

Computer and Information Sciences

The Computer and Information Sciences (CIS) (formerly Integrated Computing) doctoral program is housed in the Donaghey College of Engineering and Information Technology. Faculty, curriculum, and resources for this program come from two departments: Computer Science and Information Science.

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 track areas are offered:

ADMISSION REQUIREMENTS

Applicants for the Computer and Information Sciences program must meet the requirements of the UALR Graduate School in addition to the following criteria:

- 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 over undergraduate GPA of at least 3.0 (4.0 scale) for their last 60 credit hours.

- GRE test scores taken with five years of application. The desired combined quantitative and verbal score 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 and Information Science tracks have an additional minimum score requirement of 156 for the 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. 3.0 or above on a 6.0 scale) or through samples of their written work.

- Three (3) 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

- Resume 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 adherence to the admission criteria stated above. The CIS Steering Committee will evaluate the compatibility between the applicant's background, research interests, and communication skills vis-a-vis the doctoral program when making admission decisions and may decline to recommend for an admission an otherwise qualified application based on a lack of fit with the program.

CONDITIONAL ADMISSION

The CIS 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 outlined by the specified time frame to be admitted fully (e.g. student may be required to maintain a B or higher in their first 9 hours in the program). The performance of such students will be evaluated 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 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 12 credit hours of 5000-level courses that can be used toward this requirement. These 33 credit hours of coursework must include 6 credit hours of General Core classes, 12 credit hours of Primary Track courses, a minimum

of 12 credit of electives, and 3 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 graduate program 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:

- CPSC 7311 - Software Engineering for Computer Science track

- CPSC 7382 Systems Analysis and Design
  or

- IFSC 7310 - Information Systems Analysis for Information Quality and Information Science tracks
- IFSC 7321 - Information Science: Principles and Theory for all tracks

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 3 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 CIS 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 CIS Steering Committee.

SEMINAR REQUIREMENT

All Ph.D. students are required to register for the 1 credit hour Integrated Computing Seminar for 3 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 track 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

Graduate credits may be granted for equivalent course work from other institutions, exclusive of thesis or other exit project credits, with approval of the appropriate program coordinator and the Graduate School dean. Such credit must be no more than 5 years old and must have a letter grade of B or higher. Students interested in requesting a credit transfer should discuss the request with their doctoral adviser and appropriate graduate program coordinator.

The request must also be approved by the graduate program 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 with be counted toward the degree based upon the applicability of the courses selected for dissertation work and the student's educational goals.

RESEARCH ADVISER

Each student will choose a faculty member to be his or her mentor through the doctoral program. Students should formally declare a research adviser preferably at the end of the first semester but not later than the second semester. New students will be advised initially by the program coordinator of the student's chosen track area. Through interactions with faculty, most students should have selected a doctoral adviser to guide them through their course work, preparation for the qualifying exams, and dissertation process by the end of their first two semesters.

EXAMINATION COMMITTEES

The research pursued towards the Ph.D. degree is monitored by two committees: 1) Qualifying Examination Committee (QEC) and 2) Doctoral Examination Committee (DEC). The role of these committees is to monitor and help direct a student's academic and research program. The QEC should be formed by the student from the faculty members in the program. For more information, please refer to the Qualifying Examination Guideline.

The DEC should be formed by the student in consultation with his or her research adviser after the student has successfully completed his or her Qualifying Examination. The DEC shall comprise a minimum of 4 members with the student's dissertation adviser serving as the committee chair. The chair and at least 1 other member must hold Full Graduate Faculty Status, hold a doctoral degree, and be a full-time faculty member of either the Department of Computer Science or the Department of Information Science. The third member must also hold Full Graduate Faculty Status and a doctoral degree, but can be a full-time faculty member of any UA Little Rock college, school, or department. The fourth member(s) can be anyone holding graduate faculty status approved for dissertation committee service including Affiliate Graduate Faculty Status. The graduate program coordinator must approve and document the DEC's constituency after its initial review by the CIS Steering Committee. The student will make an oral defense of his or her dissertation to the entire committee, after which the committee will vote pass or fail. The student will pass the oral defense if a majority of the entire committee votes to pass. In the case of a tie vot e, the chair of the department in which the student is enrolled will cast the deciding vote regardless of whether the chair is, or is not, a member of the student's DEC. If a student fails the oral defense, the student's advisor may reschedule a second oral defense. If a student fails the second defense, the student will be dismissed from the program.

QUALIFYING EXAMINATION

The purpose of the qualifying examination is to determine whether the student is ready to pursue research in his/her area of interest and possesses the competency and knowledge desired of a doctoral candidate. Only students, who have at least 4 semesters of graduate work completed, including the core courses, are allowed to take the Qualifying Examination a maximum of 2 times. It is an oral examination conducted by the Qualifying Examination Committee (QEC). The oral examination is considered to be passed if all members of the QEC vote "yes" on the competency and knowledge level. Note: In any discrepancy the appeal process of the university holds. For more information, please refer to the Qualifying Examination Guideline (QEG).

DISSERTATION PROPOSAL

Following the completion of the core courses and Qualifying Examination, candidates will write a dissertation proposal for their DEC detailing their intended research plan and objectives in National Science Foundation (NSF) format. Candidates must make an oral defense of their proposal to their PEC. Candidates should allow for ample time between the dissertation proposal and the dissertation defense (typically one to two years depending on the student's background). The dissertation subject must be a scholarly contribution to a major field of computer and information sciences in the student's track area, consisting of new important knowledge or a major modification, amplification, or interpretation of existing significant knowledge.

The candidate's dissertation proposal must be given to the doctoral advisory committee 2 weeks in advance of meeting with the committee. The candidate must orally defend the rationale and research procedures for the proposed doctoral dissertation to fulfill the qualifying exam requirements. The proposal presentation should be advertised publicly at least 2 weeks prior to the presentation. Candidates who fail (e.g. not receiving a unanimous pass) 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 graduate program coordinator. For more information, please refer to the Proposal Examination Guideline (PEG).

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. In the public session, the candidates will make a presentation of their research results. The second part of the dissertation defense will be a closed session during which the candidate will be examined by the DEC in private. The dissertation defense 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 dissertation defense, the doctoral advisory committee will vote to either pass or fail the student. If one negative vote is received from committee members, it is considered a failure of the exam. Supervisory of examining committee report forms must be filed at the conclusion of the defense with the graduate program 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 qualifying examination orally.

- Successful completion of proposal and oral defense.

- Successful completion of dissertation and oral defense.

- Successful completion of seminar and ethics requirements.

ADDITIONAL PROGRAM REQUIREMENTS:

- A maximum of 2 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 1 independent study course (3 credits) can be applied toward the Ph.D. degree.

- Only 2 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. Students may be required to take additional courses to gain the necessary prerequisite knowledge.

REQUIRED COURSES FOR COMPUTER AND INFORMATION SCIENCES EMPHASES

A list of courses used in the various tracks of the CIS 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.

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 9 credit hours, 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 assistantships, the online application process, and other financial assistance opportunities, visit the CIS website at ualr.edu/eit. A student supported by a graduate assistantship must be a registered full-time student taking at least 9 credit hours during each 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 should exceed 550 (paper-based test) or 213 (computer-based test) or 79 (internet-based test).

Applicants with scores close to the required score for their test format may be admitted provisionally upon the recommendation of the CIS Steering Committee to the dean of the 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).

GENERAL CORE COURSE DESCRIPTIONS

The notation used below should be taken into consideration when selecting course work.
*Required for Computer Science students
**Required for Information Science or Information Quality students
+Required Core Courses

- CPSC 7382 - Systems Analysis and Design **

- IFSC 7310 - Information Systems Analysis

- IFSC 7321 - Information Science: Principles and Theory

Information Quality Emphasis Area **

Established as part of the Information Science Department in 2006 by the UALR Donaghey College of Engineering and Information Technology (EIT) in collaboration with the Massachusetts Institute of Technology Chief Data Officer and Information Quality (MIT CDOIQ) Program, the UALR Information Quality track is dedicated to providing a state-of-the-art curriculum for information quality education, contributing new ideas to the information quality body of knowledge, and establishing partnerships with the industry, government, and professional societies. Information quality (IQ) is an emerging discipline concerned with maximizing the value of an organization's information assets while also minimizing risk, and assuring that the information products produced by the organization will create value for the customers who use them. Graduates of the track are prepared to pursue a variety of industry careers such as Chief Data Officer, Leader for Enterprise Data Strategy and Innovation, and Director of Data Governance, as well as research and teaching roles in higher education.

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.

- INFQ 7303 - Principles of Information Quality **
- INFQ 7322 - Information Quality Theory **
- INFQ 7367 - Information Quality Policy and Strategy **

Computer and Information Sciences, Information Science Track, Ph.D.

Computer and Information Sciences

The Computer and Information Sciences (CIS) (formerly Integrated Computing) doctoral program is housed in the Donaghey College of Engineering and Information Technology. Faculty, curriculum, and resources for this program come from two departments: Computer Science and Information Science.

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 track areas are offered:

ADMISSION REQUIREMENTS

Applicants for the Computer and Information Sciences program must meet the requirements of the UALR Graduate School in addition to the following criteria:

- 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 over undergraduate GPA of at least 3.0 (4.0 scale) for their last 60 credit hours.

- GRE test scores taken with five years of application. The desired combined quantitative and verbal score 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 and Information Science tracks have an additional minimum score requirement of 156 for the 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. 3.0 or above on a 6.0 scale) or through samples of their written work.

- Three (3) 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

- Resume 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 adherence to the admission criteria stated above. The CIS Steering Committee will evaluate the compatibility between the applicant's background, research interests, and communication skills vis-a-vis the doctoral program when making admission decisions and may decline to recommend for an admission an otherwise qualified application based on a lack of fit with the program.

CONDITIONAL ADMISSION

The CIS 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 outlined by the specified time frame to be admitted fully (e.g. student may be required to maintain a B or higher in their first 9 hours in the program). The performance of such students will be evaluated 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 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 12 credit hours of 5000-level courses that can be used toward this requirement. These 33 credit hours of coursework must include 6 credit hours of General Core classes, 12 credit hours of Primary Track courses, a minimum of 12 credit of electives, and 3 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 graduate program 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:

- CPSC 7311 - Software Engineering for Computer Science track

- CPSC 7382 Systems Analysis and Design
  or

- IFSC 7310 - Information Systems Analysis for Information Quality and Information Science tracks

- IFSC 7321 - Information Science: Principles and Theory for all tracks

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 3 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 CIS 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 CIS Steering Committee.

SEMINAR REQUIREMENT

All Ph.D. students are required to register for the 1 credit hour Integrated Computing Seminar for 3 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 track 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

Graduate credits may be granted for equivalent course work from other institutions, exclusive of thesis or other exit project credits, with approval of the appropriate program coordinator and the Graduate School dean. Such credit must be no more than 5 years old and must have a letter grade of B or higher. Students interested in requesting a credit transfer should discuss the request with their doctoral adviser and appropriate graduate program coordinator.

The request must also be approved by the graduate program 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 with be counted toward the degree based upon the applicability of the courses selected for dissertation work and the student's educational goals.

RESEARCH ADVISER

Each student will choose a faculty member to be his or her mentor through the doctoral program. Students should formally declare a research adviser preferably at the end of the first semester but not later than the second semester. New students will be advised initially by the program coordinator of the student's chosen track area. Through interactions with faculty, most students should have selected a doctoral adviser to guide them through their course work, preparation for the qualifying exams, and dissertation process by the end of their first two semesters.

EXAMINATION COMMITTEES

The research pursued towards the Ph.D. degree is monitored by two committees: 1) Qualifying Examination Committee (QEC) and 2) Doctoral Examination Committee (DEC). The role of these committees is to monitor and help direct a student's academic and research program. The QEC should be formed by the student from the faculty members in the program. For more information, please refer to the Qualifying Examination Guideline.

The DEC should be formed by the student in consultation with his or her research adviser after the student has successfully completed his or her Qualifying Examination. The DEC shall comprise a minimum of 4 members with the student's dissertation adviser serving as the committee chair. The chair and at least 1 other member must hold Full Graduate Faculty Status, hold a doctoral degree, and be a full-time faculty member of either the Department of Computer Science or the Department of Information Science. The third member must also hold Full Graduate Faculty Status and a doctoral degree, but can be a full-time faculty member of any UA Little Rock college, school, or department. The fourth member(s) can be anyone holding graduate faculty status approved for dissertation committee service including Affiliate Graduate Faculty Status. The graduate program coordinator must approve and document the DEC's constituency after its initial review by the CIS Steering Committee. The student will make an oral defense of his or her dissertation to the entire committee, after which the committee will vote pass or fail. The student will pass the oral defense if a majority of the entire committee votes to pass. In the case of a tie vot e, the chair of the department in which the student is enrolled will cast the deciding vote regardless of whether the chair is, or is not, a member of the student's DEC. If a student fails the oral defense, the student's advisor may reschedule a second oral defense. If a student fails the second defense, the student will be dismissed from the program.

QUALIFYING EXAMINATION

The purpose of the qualifying examination is to determine whether the student is ready to pursue research in his/her area of interest and possesses the competency and knowledge desired of a doctoral candidate. Only students, who have at least 4 semesters of graduate work completed, including the core courses, are allowed to take the Qualifying Examination a maximum of 2 times. It is an oral examination conducted by the Qualifying Examination Committee (QEC). The oral examination is considered to be passed if all members of the QEC vote "yes" on the competency and knowledge level. Note: In any discrepancy the appeal process of the university holds. For more information, please refer to the Qualifying Examination Guideline (QEG).

DISSERTATION PROPOSAL

Following the completion of the core courses and Qualifying Examination, candidates will write a dissertation proposal for their DEC detailing their intended research plan and objectives in National Science Foundation (NSF) format. Candidates must make an oral defense of their proposal to their PEC. Candidates should allow for ample time between the dissertation proposal and the dissertation defense (typically one to two years depending on the student's background). The dissertation subject must be a scholarly contribution to a major field of computer and information sciences in the student's track area, consisting of new important knowledge or a major modification, amplification, or interpretation of existing significant knowledge.

The candidate's dissertation proposal must be given to the doctoral advisory committee 2 weeks in advance of meeting with the committee. The candidate must orally defend the rationale and research procedures for the proposed doctoral dissertation to fulfill the qualifying exam requirements. The proposal presentation should be advertised publicly at least 2 weeks prior to the presentation. Candidates who fail (e.g. not receiving a unanimous pass) 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 graduate program coordinator. For more information, please refer to the Proposal Examination Guideline (PEG).

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. In the public session, the candidates will make a presentation of their research results. The second part of the dissertation defense will be a closed session during which the candidate will be examined by the DEC in private. The dissertation defense 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 dissertation defense, the doctoral advisory committee will vote to either pass or fail the student. If one negative vote is received from committee members, it is considered a failure of the exam. Supervisory of examining committee report forms must be filed at the conclusion of the defense with the graduate program 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 qualifying examination orally.

- Successful completion of proposal and oral defense.

- Successful completion of dissertation and oral defense.

- Successful completion of seminar and ethics requirements.

ADDITIONAL PROGRAM REQUIREMENTS:

- A maximum of 2 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 1 independent study course (3 credits) can be applied toward the Ph.D. degree.

- Only 2 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. Students may be required to take additional courses to gain the necessary prerequisite knowledge.

REQUIRED COURSES FOR COMPUTER AND INFORMATION SCIENCES EMPHASES

A list of courses used in the various tracks of the CIS 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.

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 9 credit hours, 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 assistantships, the online application process, and other financial assistance opportunities, visit the CIS website at ualr.edu/eit. A student supported by a graduate assistantship must be a registered full-time student taking at least 9 credit hours during each the fall and spring semesters and is prohibited from any other employment.

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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 should exceed 550 (paper-based test) or 213 (computer-based test) or 79 (internet-based test). Applicants with scores close to the required score for their test format may be admitted provisionally upon the recommendation of the CIS Steering Committee to the dean of the 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).

GENERAL CORE COURSE DESCRIPTIONS

The notation used below should be taken into consideration when selecting course work.
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**Required for Information Science or Information Quality students
+Required Core Courses

- CPSC 7382 - Systems Analysis and Design **
- IFSC 7310 - Information Systems Analysis
- IFSC 7321 - Information Science: Principles and Theory

Information Science Track

Information Science makes sense of the data that people gather through information technology. The Information Science track of the Ph.D. in CIS focuses on the theory, applications, technologies, and systems that classify, manipulate, store, retrieve, and disseminate information. This track seeks to expand human and technical capabilities in a world where information is of central importance. As with the other tracks, graduates will have a Ph.D. in CIS, but with an Information Science track. Graduates in this track will most likely focus their doctoral research on data, information, and knowledge, how to manage and manipulate it, and what to do with it, rather than on developing novel hardware or tools for software development. They will become deeply immersed in the knowledge, skills, and technologies needed to design and develop systems for better storage, retrieval, and use

of information. Graduates will be equipped to go on to challenging information technology careers in business, academia, and government.

- IFSC 5345 - Information Visualization
- IFSC 7310 - Information Systems Analysis **
- IFSC 7321 - Information Science: Principles and Theory **
- CPSC 7351 - Database Design **

or

- IFSC 7320 - Database Systems **
- IFSC 7360 - Data Protection and Privacy
- IFSC 7370 - Data Science and Technologies

Department of Information Science

Master of Science
Bioinformatics, M.S.

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 proficiency exams.)

Program Requirements

The MS program is built around four cores. Students must complete 35 credit hours consisting of the following:

Core Courses (four classes, 15 credits)

- BINF 5445 - Bioinformatics Theory and Applications (UALR-fall)

- BIOL 5415 - Biometry (UAMS)

- BIOL 5417 - Molecular Biology (UALR-spring)

One of the following:

- CPSC 7375 - Machine Learning (UALR-spring)

- CPSC 7373 - Artificial Intelligence (UALR-fall)

- CPSC 5383 - Artificial Intelligence (UALR-fall)

- CPSC 7385 - Analysis of Algorithms (UALR-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 Bioinformatics 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.

Information Quality, M.S.

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, the program is available online through UA Little Rock Online (https://ualr.edu/online/).

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.

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.

EARLY ENTRY PROGRAM ADMISSION

The Early Entry 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 Early Entry 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 Early Entry 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 Early Entry B.S. to M.S. program application

- A written statement of career goals and reasons for applying to the Early Entry 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 Early Entry 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 Early Entry 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 Early Entry 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 Early Entry B.S. to M.S. program coordinator upon acceptance to the Early Entry B.S. to M.S. program to map out the graduate courses they will take. Students accepted in the Early Entry 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 Early Entry 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, INFQ 7298, INFQ 7398, INFQ 7498, INFQ 7598, or INFQ 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:

- INFQ 7686 - Graduate Project
- INFQ 7386 - Graduate Project (repeated over two semesters)
- Minimum of three credits of INFQ 7191, INFQ 7291, or INFQ 7391 Cooperative Education in Information Quality followed by INFQ 7386 Graduate Project.

To be eligible to enroll

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 7337 - Project and Change Management

- 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

  or

- BINS 7307 - Systems Analysis and Design Methods

- IFSC 7320 - Database Systems

  or

- BINS 7305 - Advanced Database Management Systems

Electives

INFQ Elective:

Any three-hour graduate course with an INFQ prefix such as:

- INFQ 7318 - Total Quality Management and Statistical Quality Control

- INFQ 7348 - Entity Resolution and IQ

- INFQ 7322 - Information Quality Theory

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: Principles and Theory

- IFSC 7325 - Deep Learning Theory and Apps

- IFSC 7331 - Network Science

- 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

- IFSC 7370 - Data Science and Technologies

Information Science, M.S.

THIS PROGRAM IS OFFERED BOTH IN-PERSON AND AS A 100% ONLINE DEGREE PROGRAM THROUGH UA LITTLE ROCK ONLINE.

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 including working professionals who are interested in helping organizations harness the power of data by moving into more 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 other standard test scores are recommended for applicants in foreign countries and for domestic applicants whose applications would be significantly strengthened thereby. The program may recommend an applicant to submit such scores.

- Completion of any remedial course work that may be specified by the department. Students seeking regular admission to the program without needing remedial coursework will have completed (with a grade of B or better in each course) undergraduate course work equivalent to the following UA Little Rock undergraduate courses:

- IFSC 2300 Object-oriented Software

- IFSC 3320 Database Concepts

- STAT 2350 Introduction to Statistical Methods

  Students with approved graduate certificates from UA Little Rock will be permitted to apply any courses taken as part of their graduate certificate towards the completion of the MSIS program, providing both programs allow the courses to be used.

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.

EARLY ENTRY PROGRAM ADMISSION

The Early Entry B.S. to M.S. 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 B.S. in Information Science (IFSC) is 120 credits. The M.S. in Information Science (MSIS) is 33 credits. Under the Early Entry 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 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 Early Entry 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 Early Entry 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.

- Note: The Master's programs in Information Quality and Information Science do require the GRE. However, the graduate certificates in the Information Quality and Information Science do not. Moreover, students successfully completing the graduate certificates are eligible to waive the GRE requirement and continue on to their master's. Because the courses in the graduate certificate are an embedded subset of their respective master's and because the Early Entry students will be completing the certificate courses first, they will be eligible to apply for the M.S. based on successful performance in their first four graduate courses.

- Students with an overall GPA between 3.2 and 3.5 may be admitted to the Early Entry 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 Early Entry B.S. to M.S. program.

TO APPLY, STUDENTS MUST SUBMIT THE FOLLOWING:

- Completed UALR Graduate School application

- Early Entry B.S. to M.S. Program form

- Transcript including transferred courses (Note: GPA must be recalculated to include all relevant transfer work being applied towards the completion of the B.S. in Information Science.)

- A written statement of career goals and reasons for applying to the Early Entry 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 Early Entry 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.

  Once a completed application has been received by the Information Science department, the student will be notified quickly, generally within 30 days, of whether they have been accepted into the MSIQ or MSIS Early Entry B.S. to M.S. program. The program admits a limited number of students each year, and applicants will be considered for admission on a competitive basis. Acceptance into the Early Entry B.S. to M.S. program indicates a commitment by the student to pursue the M.S. degree (either MSIS or MSIQ) after the completion of the B.S. in Information Science.

AFTER APPLYING:

- The application for the Early Entry 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 courses. If, at the end of his/her baccalaureate degree, an Early Entry 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 Early Entry B.S. to M.S. Program Coordinator upon acceptance to the Early Entry B.S. to M.S. program to map out the graduate courses they will take. Students accepted in the Early Entry 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 B.S. 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 Early Entry B.S. to M.S. Program. The student is then welcome to apply to the MSIS program using the regular admission process and to be advised accordingly.

  Note: Both the IQ and IS graduate programs also offer the option of a graduate certificate in Information Quality (4 courses) or a graduate certificate in Information Science (4 courses). Students will be encouraged to complete the four courses that make up the graduate certificate in their desired area first. While any four courses of the M.S. could be taken by the student while they are an undergraduate, taking the four courses that make up the certificate allows the student to at least complete a graduate certificate in conjunction with the B.S. if they choose not to finish the M.S.

  Note: Students interested in earning the graduate certificate in addition to the M.S. degree will need to request admission to both programs.

  Note: Both the MSIS and MSIQ are offered using distance technologies so it is possible for students to complete these degrees remotely.

PROGRAM RESTRICTIONS

- To ensure that they follow the proper degree plan, students must meet with the Early Entry B.S. to M.S. Program Coordinator upon acceptance into the program to map our the graduate courses they will take.

- Accepted students will have provisional status in the graduate program, pending the award of their baccalaureate degree.

- If, at the end of his/her baccalaureate degree, an Early Entry B.S. to M.S. student has failed to meet the Graduate School admission requirement of a 3.0 overall undergraduate GPA with no grades below a B, he/she will be dismissed from the graduate program.

- Students will be advised to review the Scholastic Standards of the UALR Graduate School (Policy #509.15) so they will be aware that if they are academically dismissed from the Early Entry B.S. to M.S. program then they will not be eligible to pursue any other graduate study options at UALR.

- Students accepted into the Early Entry B.S. to M.S. program will be subject to the same policies as traditionally matriculated graduate students.

- The Early Entry B.S. to M.S. program may not be used in conjunction with the credit reservation program; therefore, no graduate courses taken before admission to the program may be applied to a graduate degree.

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 5345 - 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: Principles and Theory (required for the Ph.D.)
- CPSC 7382 - Systems Analysis and Design
- IFSC 7310 - Information Systems Analysis
- CPSC 7311 - Software Engineering (required for the Ph.D.)
- IFSC 5325 - Data Mining Concepts and Techniques
- IFSC 5330 - Database Security
- IFSC 5339 - Network Security
- IFSC 5360 - Social Computing
- IFSC 7325 - Deep Learning Theory and Apps
- IFSC 7331 - Network Science
- 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 - Total Quality Management and Statistical Quality Control
- INFQ 7322 - Information Quality Theory
- INFQ 7337 - Project and Change Management
- INFQ 7342 - Information Quality Tools and Industry Landscape
- INFQ 7367 - Information Quality Policy and Strategy
- 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 typically register with advisor approval in IFSC 7398 for two semesters to complete the required six credits of IFSC graduate thesis course work.

- Six credits of Master's Project: students typically 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 (INFQ 7391 or equivalent) with the graduate project course (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 broadband 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 also 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. Students in the program locally may also take advantage of the webcasting of classes; however, the distance education degree option done is primarily for remote students, i.e., students who, because of distance or other circumstances, cannot attend on-campus classes on a regular basis. 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. Examinations for local students are administered in the campus classroom by the instructor. Examinations for remote students must be administered by an approved proctor.

Graduation Requirements

Successful completion of the program of study outlined above with a GPA of at least 3.0.

Doctor of Philosophy
Bioinformatics, Ph.D.

The Ph.D. program admission requires completion of the M.S. degree in bioinformatics or a closely related field. Students pursuing the Ph.D. need to demonstrate good research potential in their culminating master's project or thesis. The completion of the Ph.D. program requires enrolling in a minimum of two credits of the BINF 7193 Bioinformatics Seminar, taking a minimum of 32 credit hours of research, culminating in the successful defense of the student's dissertation research. 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.

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.

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 should be 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.

Graduate Certificate

Data Science Graduate Certificate

THIS PROGRAM IS OFFERED BOTH IN-PERSON AND AS A 100% ONLINE PROGRAM THROUGH UA LITTLE ROCK ONLINE.

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.

- For regular admission, 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.

SPECIAL CONDITIONAL ADMISSION

Applicants with a baccalaureate degree who have a cumulative GPA between 2.0 and 2.69 will be considered for special conditional admission provided they have at least 3 years of professional experience and submit a statement of purpose or similar letter explaining their desire and readiness to enroll.

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 Protection and 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.

Information Quality Graduate Certificate

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, the program is available through UA Little Rock Online (https://ualr.edu/online/).

- 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 and Industry Landscape

- INFQ 7367 - Information Quality Policy and Strategy

Elective Courses (Three hours, Select one course)

- INFQ 7318 - Total Quality Management and 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 for master's-level students. Contact the program coordinator for more information.

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

Department of Systems Engineering

Master of Science

Electrical and Computer Engineering, M.S.

The Master of Science program in Electrical and Computer Engineering (MSECE) consists of a minimum of 31 credit hours beyond the baccalaureate degree.

In addition, students are required to maintain acceptable performance; all master's course work must be completed with a minimum GPA of 3.0. A student receiving one "C" in the course work will be warned that his/her performance is unacceptable and that the student will be reviewed by ECE faculty, which will also suggest corrective. A student receiving two "C's" will be dismissed from the program, pending review by the ECE faculty.

Students enrolled in non-thesis option are required to do a graduate project supervised by an ECE faculty member. The student's plan of study must be developed in conjunction with his/her thesis/project advisor or Graduate coordinator and filled with the Graduate Coordinator.

ADMISSION REQUIREMENTS

In addition to the UALR Graduate School admission requirements, the applicants for the M.S. program in Electrical and Computer 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. The GRE requirement 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. Conditionally admitted students must fulfill the requirements of the UALR Graduate School and those specified in their letter of admission to achieve regular admission.

EARLY ADMISSION REQUIREMENTS

Undergraduate students may apply and be accepted provisionally into the MS program any time after completing 75 or more hours of undergraduate course work. However, at least 90 hours of undergraduate coursework must have been completed by the time the first graduate Electrical and Computer Engineering course is taken.

1. Students must satisfy the minimum university requirements for admission to an early graduate program.

2. Students must be majoring in the BS in Electrical and Computer Systems Engineering

3. Students must have completed 40 hours of ECE Courses with a GPA of 3.3 in those courses

4. Students must be recommended for admission by the Electrical and Computer Engineering faculty

TRANSFER CREDIT

A maximum of six hours can be transferred from a graduate program from another university with a graduate coordinator's approval.

Program Requirements
Core Courses

Student is required to take 24 hours of graduate level courses (27 hours of Non-thesis option) subject to the following restrictions.

1. At least 15 hours **must be taken** in fields associated with electrical and computer engineering

2. Up to 9 hours can be taken from graduate programs in the following STEM areas: Physics, Mathematics, Computer and Information Sciences

3. Up to 6 hours can be taken from graduate courses in management sciences

4. Students enrolled in early entry Masters can count up to 12 hours of graduate course work taken as part of Bachelors in Engineering and Computer Engineering degree curriculum

Electives

Students who have been admitted to the early entry graduate program in the MS in Systems Engineering may use 12 hours from the following courses as electives toward BS in Electrical and Computer Systems Engineering. The same courses can then be used as electives toward MS on Systems Engineering.

- SYEN 5320 - Linear Systems Theory
- SYEN 5331 - Advanced Computer Architecture
- SYEN 5332 - Applied Operating Systems
- SYEN 5334 - Software Systems Engineering
- SYEN 5336 - Advances in Communication Networks
- SYEN 5350 - Digital Signal Processing
- SYEN 5352 - Spatial Time Series
- SYEN 5353 - Advanced Digital Communications
- SYEN 5354 - Power Systems Analysis
- SYEN 5355 - Mobile Multimedia Internet
- SYEN 5356 - Radio Frequency Techniques and Systems
- SYEN 5358 - Cellular and Wireless Communications
- SYEN 5366 - Advanced Digital Systems

Research Methodology/Ethics

This will take 1 Credit hour and students can select either of the following.

- SYEN 7101 - Research Methodology

- SYEN 7112 - Research Ethics

Master's Thesis
This will cover 6 credit hours.

- SYEN 8100 - Systems Engineering Master's Thesis
- SYEN 8200 - Systems Engineering Master's Thesis
- SYEN 8300 - Systems Engineering Master's Thesis

Graduate Project
This will cover 3 credit hours.

- SYEN 7385 - Systems Engineering Graduate Project

Master's Thesis/Project Advisor

The advisor is the faculty member who supervises the student's thesis work or project. Any faculty member appointed in the Systems Engineering department may serve as the advisor. Faculty members outside the Systems Engineering department may serve as advisor with approval of Systems Engineering Faculty. A student admitted to the master's program should declare an advisor before he/she enrolls in 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 the 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.

Mechanical Engineering, M.S.

The Masters of Science program in Mechanical Engineering consists of a minimum of 31 credit hours beyond the baccalaureate degree.

In addition, students are required to maintain acceptable performance; all master's course work must be completed with a minimum GPA of 3.0. A student receiving one "C' in the course work will be warned that his/her performance is unacceptable and that the student will be reviewed by Mechanical Engineering faculty which will suggest corrective. A student receiving two "C's" will be dismissed from the program, pending review by the Mechanical Engineering faculty.

The student's plan of study must be developed in conjunction with his/her project advisor or Graduate Coordinator and filed with the Graduate Coordinator.

ADMISSION REQUIREMENTS

In addition to the UALR Graduate School admission requirements, the applicants for the M.S. program in Mechanical 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. The GRE requirement 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. Conditionally admitted students must fulfill the requirements of the UALR Graduate School and those specified in their letter of admission to achieve regular admission.

EARLY ADMISSION REQUIREMENTS

Undergraduate students may apply and be accepted provisionally into the MS program any time after completing 75 or more hours of undergraduate course work. However, at least 90 hours of undergraduate coursework must have been completed by the time the first graduate Mechanical Engineering course is taken.

1. Students must satisfy the minimum university requirements for admission to an early graduate program.
2. Students must be majoring in the BS in Mechanical Engineering
3. Students must have completed SYEN 3371 (Dynamics I), SYEN 3373 (Mechanics of Materials I), SYEN 3374 (Fluid Mechanics I), and SYEN 3378 (Thermodynamics I) with a minimum gpa of 3.5 in those courses.
4. Students must be recommended for admission by the Mechanical Engineering faculty

TRANSFER CREDIT

A maximum of six hours can be transferred from a graduate program from another university with a graduate coordinator's approval.

Program Requirements

Core Courses
The program core provides students with strong mechanical engineering preparation needed for either a successful professional career or for further enhancing their education in high-quality engineering doctoral programs.

SYEN 5315 - Dynamics II

SYEN 5371 - Thermodynamics II

SYEN 5374 - Fluid Mechanics II
SYEN 5376 - Mechanics of Materials II

Specialization Requirement

6 credit hours form the following list:

- SYEN 7100, 7200, 7300 (may be repeated for credit)
- SYEN 7199, 7299, 7399 (may be repeated for credit)
- SYEN 5327 - Acoustics I
- SYEN 5335 - Mechatronics I
- SYEN 5372 - Mechatronics II
- SYEN 5375 - Mechanical Vibrations
- SYEN 5381 - Thermal and Fluid System Design
- SYEN 5383 - Finite Element Analysis
- SYEN 5384 - Computer Methods in Fluids and Heat Transfer

Mathematics Requirements

6 credit hours from the list

- MATH 5301, MATH 5303, MATH 5304, MATH 5323, MATH 7311, MATH 7312, MATH 7322, MATH 7323, MATH 7324, MATH 7325
- SYEN 5340 - Applied Numerical Methods

Research Preparation

1 credit hour

SYEN 7101 - Research Methodology

Master's Thesis Advisor

The advisor is the faculty member who supervises the student's thesis work or project. Any faculty member appointed in the Systems Engineering department may serve as the advisor. Faculty members outside the Systems Engineering department may serve as advisor with approval of Systems Engineering Faculty. A student admitted to the master's program should declare an advisor before he/she enrolls in thesis or graduate project courses.

Master's Thesis 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 Proposal

3 credit hours

SYEN 8100, SYEN 8200, SYEN 8300

Thesis 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 the 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 Defense

3 credit hours
SYEN 8100, SYEN 8200, SYEN 8300

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.

- Pass thesis final defense.

Doctor of Philosophy

Engineering Science and Systems, Electrical and Computer Engineering Track, Ph.D.

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 Science, Technology, Engineering, and Mathematics. Faculty, curriculum, and resources for this program are contributed by six departments: Systems Engineering, Computer Science, Information Science, Engineering Technology, Earth Science, and Construction Management and Civil and Construction Engineering. 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 UA Little Rock 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 at least one degree (bachelor's or master's) in engineering. 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:** The combined score of the verbal and quantitative reasoning sections should be 301 or above (340 scale) with a minimum score of 155 on the quantitative reasoning section. Applicants should also have a score of 3.0 in the analytical writing section. GRE can be waived for applicants who graduate from UA Little Rock with a bachelor's or master's degree with a 3.5 GPA or higher.

- **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 UA Little Rock.

- **Letters of recommendation:** Applicants should make arrangements to for have three letters of recommendation submitted to UA Little Rock, on their behalf, by individuals familiar with their academic background and educational interests.

The student may choose a track at the time of admission according to the student's academic background. The availability of advisors will also be evaluated for each application.

The deadline for applications for summer and fall admission is April 15, and for spring admissions is November 15.

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 UA Little Rock Graduate School and the Engineering Science and Systems Governance Committee. The requirements will be explained in an admission letter.

GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships that support teaching and research opportunities are available to qualified full-time students with regular admissions. 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 semesters.

TRANSFER OF CREDIT

The student can request up to 15 credit hours of graduate-level courses to be transferred. Only courses within five years of their completion can be accepted for transfer. Only courses with grade B or above are qualified to be transferred. All transferred courses should get approval of the student's advisor, the instructors of comparable UA Little Rock courses, and the track coordinator.

PROGRAM REQUIREMENTS

The program consists of a total of 76 credit hours, which include 14 credit hours of program core courses, 9 credit hours of track core courses, 15 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.

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 14 credit hours of program core courses are listed below:

Engineering systems component – Three credit hours

- SYEN 7311 - System 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 mathematical foundations component – Six credit hours

As advised by the advisor or track coordinator.

Program Track Courses

The track courses consist of both core and elective courses, as follows:

Track core courses: 9 credit hours.
Elective courses: 15 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.

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. Before a student begins formally dissertation research, he/she is required to pass the candidacy exam. The only exception is that the candidacy exams can be waived when the student is awarded a Master's degree with thesis option in Engineering at UA Little Rock with a GPA of 3.5 or above and continues the Ph.D. program in Engineering Science and Systems with the same advisor. 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. A candidacy exam committee will be formed including three faculty members preparing the problems for the written exam. The candidacy exam structure is followed:

1. The student can take the candidacy exam as soon as possible. The student can take the exam no later than the 3rd semester he/she is in the program. The students who do not take the exams by the 3rd semester will be treated as having failed in their first attempt.

2. The student will have to officially declare his/her intention to take the candidacy exam at the beginning of 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. The students may contact the faculty members who prepare the problems for the written exam for necessary information such as syllabi and problem styles.

5. Decisions of the Track Candidacy Exam Committee will be supported by all 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 three-hour exam. Each written exam should include three different subject areas. The problems should be prepared by three different faculty members including the advisor. The subject areas should be proposed by the advisor and approved by the track coordinator. The instructors may provide the syllabi and examples of problems for the selected topics.

Passed the exam requires an overall grade of 70% or above with at least 60% in each subject area.

Oral Component:

The student will be given a research topic on which to submit a written report. The student should submit a report within one month after the written exam.

Based on the report, the student will be orally tested by the Track Candidacy Exam Committee. The oral exam will be scheduled no sooner than two weeks after the student has submitted the report. The advisor in coordination with track coordinator will organize the oral exam.

The oral exam will be of one-hour duration.

Proposal Defense

A candidate must present his/her research proposal to their Doctoral Dissertation Committee within two semesters after passing the candidacy exam or the first 9 hours taken for Doctoral Research Dissertation, whichever comes first. At the completion of the proposal defense, the Doctoral Dissertation Committee will vote to either pass or fail the student. A student who fails 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, s/he 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 defend 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 dissertation defense, the Doctoral Dissertation Committee will vote to either pass or fail the student. A majority vote is required to pass. If a student fails the exam, s/he may be dismissed from the program, pending review by the Engineering Science and Systems Governance Committee.

Students must submit the written dissertation and published papers to the Doctoral Dissertation Committee before the dissertation defense.

Doctoral Dissertation Advisor

A student admitted to the doctoral program must declare an advisor, with advisor's approval, no later than the second semester that he/she is in the program. The advisor must be Engineering Science and Systems program faculty.

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. The dissertation committee will primarily consist of faculty in the track specialty and include one member outside the track. Any exceptions(s) will be subject to the approval of track coordinator and graduate coordinator. 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.

Residency Requirement

After entering the ENSS program, a candidate must complete 18 hours on campus within four consecutive semesters, with optional summer semesters. Of these 18 hours, at least six are to be research credits.

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 fifteen 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 5 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.

For a student with a M.S. Programs from UA Little Rock, all lecture credit hours earned in the M.S. program with a grade of B or above count towards the ENSS Ph.D.'s program.

Electrical and Computer Engineering Track

Core courses:
- SYEN 7320 - Linear Systems Theory

- SYEN 5332 - Applied Operating Systems

  or

- CPSC 7321 - Operating Systems

- SYEN 5354 - Power Systems Analysis

- SYEN 5366 - Advanced Digital Systems

- SYEN 7355 - Statistical Signal Processing

Elective courses examples:
- SYEN 7306 - Real-time Embedded Systems

- SYEN 7331 - Transducers and Real Time Control

- SYEN 7332 - Advanced Operating Systems Design

- CPSC 7321 - Operating Systems

- CPSC 7331 - Computer Architecture

- CPSC 7374 - Image Processing

- ### 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

Engineering Science and Systems, Mechanical and Materials Engineering Track, Ph.D.

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 Science, Technology, Engineering, and Mathematics. Faculty, curriculum, and resources for this program are contributed by six departments: Systems Engineering, Computer Science, Information Science, Engineering Technology, Earth Science, and Construction Management and Civil and Construction Engineering. 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 UA Little Rock 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 at least one degree (bachelor's or master's) in engineering. 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:** The combined score of the verbal and quantitative reasoning sections should be 301 or above (340 scale) with a minimum score of 155 on the quantitative reasoning section. Applicants should also have a score of 3.0 in the analytical writing section. GRE can be waived for applicants who graduate from UA Little Rock with a bachelor's or master's degree with a 3.5 GPA or higher.
- **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 UA Little Rock.

- **Letters of recommendation:** Applicants should make arrangements to for have three letters of recommendation submitted to UA Little Rock, on their behalf, by individuals familiar with their academic background and educational interests.

The student may choose a track at the time of admission according to the student's academic background. The availability of advisors will also be evaluated for each application.

The deadline for applications for summer and fall admission is April 15, and for spring admissions is November 15.

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 UA Little Rock Graduate School and the Engineering Science and Systems Governance Committee. The requirements will be explained in an admission letter.

GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships that support teaching and research opportunities are available to qualified full-time students with regular admissions. 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 semesters.

TRANSFER OF CREDIT

The student can request up to 15 credit hours of graduate-level courses to be transferred. Only courses within five years of their completion can be accepted for transfer. Only courses with grade B or above are qualified to be transferred. All transferred courses should get approval of the student's advisor, the instructors of comparable UA Little Rock courses, and the track coordinator.

PROGRAM REQUIREMENTS

The program consists of a total of 76 credit hours, which include 14 credit hours of program core courses, 9 credit hours of track core courses, 15 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.

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 14 credit hours of program core courses are listed below:

Engineering systems component – Three credit hours

- SYEN 7311 - System 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 mathematical foundations component – Six credit hours

As advised by the advisor or track coordinator.

Program Track Courses

The track courses consist of both core and elective courses, as follows:

Track core courses: 9 credit hours.
Elective courses: 15 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.

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. Before a student begins formally dissertation research, he/she is required to pass the candidacy exam. The only exception is that the candidacy exams can be waived when the student is awarded a Master's degree with thesis option in Engineering at UA Little Rock with a GPA of 3.5 or above and continues the Ph.D. program in Engineering Science and Systems with the same advisor. 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. A candidacy exam committee will be formed including three faculty members preparing the problems for the written exam. The candidacy exam structure is followed

1. The student can take the candidacy exam as soon as possible. The student can take the exam no later than the 3rd semester he/she is in the program. The students who do not take the exams by the 3rd semester will be treated as having failed in their first attempt.

2. The student will have to officially declare his/her intention to take the candidacy exam at the beginning of 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. The students may contact the faculty members who prepare the problems for the written exam for necessary information such as syllabi and problem styles.

5. Decisions of the Track Candidacy Exam Committee will be supported by all the committee members present and will be any one of the following:

iv.   Pass
v.   Pass with remedial course work
vi.   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 three-hour exam. Each written exam should include three different subject areas. The problems should be prepared by three different faculty members including the advisor. The subject areas should be proposed by the advisor and approved by the track coordinator. The instructors may provide the syllabi and examples of problems for the selected topics.

Passed the exam requires an overall grade of 70% or above with at least 60% in each subject area.

Oral Component:

The student will be given a research topic on which to submit a written report. The student should submit a report within one month after the written exam.

Based on the report, the student will be orally tested by the Track Candidacy Exam Committee. The oral exam will be scheduled no sooner than two weeks after the student has submitted the report. The advisor in coordination with track coordinator will organize the oral exam.

The oral exam will be of one-hour duration.

Proposal Defense

A candidate must present his/her research proposal to their Doctoral Dissertation Committee within two semesters after passing the candidacy exam or the first 9 hours taken for Doctoral Research Dissertation, whichever comes first. At the completion of the proposal defense, the Doctoral Dissertation Committee will vote to either pass or fail the student. A students who fails 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, s/he 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 defend 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 dissertation defense, the Doctoral Dissertation Committee will vote to either pass or fail the student. A majority vote is required to pass. If a student fails the exam, s/he may be dismissed from the program, pending review by the Engineering Science and Systems Governance Committee.

Students must submit the written dissertation and published papers to the Doctoral Dissertation Committee before the dissertation defense.

Doctoral Dissertation Advisor

A student admitted to the doctoral program must declare an advisor, with advisor's approval, no later than the second semester that he/she is in the program. The advisor must be Engineering Science and Systems program faculty.

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. The dissertation committee will primarily consist of faculty in the track specialty and include one member outside the track. Any exceptions(s) will be subject to the approval of track coordinator and graduate coordinator. 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.

Residency Requirement

After entering the ENSS program, a candidate must complete 18 hours on campus within four consecutive semesters, with optional summer semesters. Of these 18 hours, at least six are to be research credits.

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 fifteen 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 5 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.

For a student with a M.S. Programs from UA Little Rock, all lecture credit hours earned in the M.S. program with a grade of B or above count towards the ENSS Ph.D.'s program.

Mechanical and Materials Engineering Track
Core courses:

- SYEN 5371 - Thermodynamics II

- SYEN 5375 - Mechanical Vibrations

  or

- SYEN 5384 - Computer Methods in Fluids and Heat Transfer

- SYEN 5383 - Finite Element Analysis

- SYEN 7317 - Nano structural Materials: Physical and Chemical Properties

  or

- SYEN 7318 - Micro- and 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

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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

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Engineering mathematical foundations component – Six credit hours

As advised by the advisor or track coordinator.

Program Track Courses

The track courses consist of both core and elective courses, as follows:

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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.

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Residency Requirement

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Courses in the Engineering Science and Systems Doctoral Program

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Systems Engineering Track

Core courses:

- SYEN 7312 - Systems Architecture and Design

- SYEN 7313 - Systems Management and Evaluation

- SYEN 7314 - Multi-criteria Decision and Risk Analysis

- SYEN 7316 - Advanced Systems Simulation

Elective courses examples:

- SYEN 7342 - Network 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

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:

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- 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 14 credit hours of program core courses are listed below:

Engineering systems component – Three credit hours

- SYEN 7311 - System 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 mathematical foundations component – Six credit hours

As advised by the advisor or track coordinator.

Program Track Courses

The track courses consist of both core and elective courses, as follows:

Track core courses: 9 credit hours.
Elective courses: 15 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.

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. Before a student begins formally dissertation research, he/she is required to pass the candidacy exam. The only exception is that the candidacy exams can be waived when the student is awarded a Master's degree with thesis option in Engineering at UA Little Rock with a GPA of 3.5 or above and continues the Ph.D. program in Engineering Science and Systems with the same advisor. 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. A candidacy exam committee will be formed including three faculty members preparing the problems for the written exam. The candidacy exam structure is followed:

1. The student can take the candidacy exam as soon as possible. The student can take the exam no later than the 3rd semester he/she is in the program. The students who do not take the exams by the 3rd semester will be treated as having failed in their first attempt.

2. The student will have to officially declare his/her intention to take the candidacy exam at the beginning of 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. The students may contact the faculty members who prepare the problems for the written exam for necessary information such as syllabi and problem styles.

5. Decisions of the Track Candidacy Exam Committee will be supported by all 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 three-hour exam. Each written exam should include three different subject areas. The problems should be prepared by three different faculty members including the advisor. The subject areas should be proposed by the advisor and approved by the track coordinator. The instructors may provide the syllabi and examples of problems for the selected topics.

Passed the exam requires an overall grade of 70% or above with at least 60% in each subject area.

Oral Component:

The student will be given a research topic on which to submit a written report. The student should submit a report within one month after the written exam.

Based on the report, the student will be orally tested by the Track Candidacy Exam Committee. The oral exam will be scheduled no sooner than two weeks after the student has submitted the report. The advisor in coordination with track coordinator will organize the oral exam.

The oral exam will be of one-hour duration.

Proposal Defense

A candidate must present his/her research proposal to their Doctoral Dissertation Committee within two semesters after passing the candidacy exam or the first 9 hours taken for Doctoral Research Dissertation, whichever comes first. At the completion of the proposal defense, the Doctoral Dissertation Committee will vote to either pass or fail the student. A student who fails 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, s/he 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 defend 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 dissertation defense, the Doctoral Dissertation Committee will vote to either pass or fail the student. A majority vote is required to pass. If a student fails the exam, s/he may be dismissed from the program, pending review by the Engineering Science and Systems Governance Committee.

Students must submit the written dissertation and published papers to the Doctoral Dissertation Committee before the dissertation defense.

Doctoral Dissertation Advisor

A student admitted to the doctoral program must declare an advisor, with advisor's approval, no later than the second semester that he/she is in the program. The advisor must be Engineering Science and Systems program faculty.

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. The dissertation committee will primarily consist of faculty in the track specialty and include one member outside the track. Any

exceptions(s) will be subject to the approval of track coordinator and graduate coordinator. 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.

Residency Requirement

After entering the ENSS program, a candidate must complete 18 hours on campus within four consecutive semesters, with optional summer semesters. Of these 18 hours, at least six are to be research credits.

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 fifteen 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 5 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.

For a student with a M.S. Programs from UA Little Rock, all lecture credit hours earned in the M.S. program with a grade of B or above count towards the ENSS Ph.D.'s program.

Telecommunications and Networking Engineering Track

Core courses:

- SYEN 5310 - Introduction to Signal Processing

  or

- SYEN 5350 - Digital Signal Processing

- SYEN 5353 - Advanced Digital Communications
- SYEN 5356 - Radio Frequency Techniques and Systems

- SYEN 5355 - Mobile Multimedia Internet

  or

- 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

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

Department of Mathematics & Statistics

Master of Science
Mathematical Sciences, Applied Mathematics, M.S.

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, and Collegiate Mathematics Education. 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

Students may be admitted to the program for **regular admission** with the following:

- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of 2.70 (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.

Students with an undergraduate cumulative GPA between 2.0 and 2.69, or a GPA between 2.7 and 3.0 in their last 60 hours may petition the department for consideration for **special conditional admission**. Applicants must discuss and provide evidence regarding two or more of the following criteria as part of their petition:

- GPA in previous mathematics/statistics courses

- Amount of time elapsed since the previous degree (5+ years preferred)

- Professional experience in mathematics, statistics, or teaching

- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Extraordinary circumstances related to the overall low GPA

Applicants whose petitions are approved by the department must maintain a GPA of 3.0 or higher in their first 9 hours of coursework in order to remain in the program. Special conditionally admitted students may also be subject to other conditions for enrollment, such as required courses in the first 9 hours of study as specified by the admissions committee. Special conditionally admitted students completing their M.S. coursework with a GPA of 3.0 or higher after their first 9 credit hours will become regularly admitted.

Applicants lacking prerequisite classes must complete specified preparatory courses. Contact the program coordinator for details.

EARLY ENTRY B.S./B.A. TO M.S.

The Early Entry B.S./B.A. to M.S. for Mathematics majors interested in pursuing a M.S. in Mathematics after graduation is intended to serve as a fast path for completing the Master's degree following completion of an undergraduate degree in mathematics.

ADMISSIONS

Students are strongly encouraged to apply to the Early Entry 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.

Undergraduate students may apply and be accepted provisionally into the M.S. Mathematics graduate program any time after completing 75 or more hours of undergraduate course work. However, at least 90 hours of undergraduate course work must have been completed by the time the first graduate Mathematics course is taken.

All applicants must have at least a 3.2 overall GPA and at least a 3.5 major GPA to be considered. Students who have transferred to our program can participate provided their relevant transfer course work (i.e. courses taken at other institutions that are being used to meet our B.S./B.A. requirements) also meets the 3.2 minimum GPA criteria and 3.5 minimum major GPA criteria.

The GRE requirement is waived for students with an overall 3.5 GPA or higher. Students with an overall GPA between 3.2 and 3.49 must apply using the GRE option.

All applicants must complete an application for and be admitted into the M.S. in Mathematics program and the Graduate School.

All applicants must complete an Early-Entry Program form and be approved for admission by the M.S. Mathematics graduate coordinator. The graduate coordinator's decision is final and cannot be appealed. The form must be approved by the graduate coordinator before the student begins graduate course work. Failure to obtain prior approval negates the ability to "double count" courses.

If, at the end of the student's baccalaureate degree, an Early Entry B.S./B.A. to M.S. student has failed to meet the Graduate School admission requirement of 2.7 overall undergraduate GPA, the student will be dismissed from the M.S. Mathematics program.

Once a completed application has been received by the Department of Mathematics and Statistics, the student will be notified quickly, generally within 30 days, whether they have been accepted into the program.

Acceptance into the Early Entry B.A./B.S. to M.S. program indicates a commitment by the student to pursue the M.S. degree in mathematics after the completion of the baccalaureate degree in mathematics.

A completed application consists of:

- A completed graduate application for the UA Little Rock Graduate School

- Completed Early-Entry Program form
- Two letters of recommendation, one of which must be from a university faculty member in the Department of Mathematics and Statistics (letters are to be submitted directly by recommenders)

- Portfolio of work in mathematics courses (optional)

Submit your application to the Early Entry B.A./B.S. to M.S. Program Coordinator.

To ensure that they follow the proper degree plan, students must meet with the M.S. Mathematics graduate coordinator upon acceptance to the Early Entry B.A./B.S. to M.S. program to map out and approve the graduate courses they will take. Accepted students will have provisional status in the graduate program, pending the award of the baccalaureate degree. Students accepted into the Early Entry B.A./B.S. to M.S. program will be subject to the same policies as traditionally matriculated M.S. Mathematics students.

The Early Entry B.A./B.S. to M.S. program may not be used in conjunction with the credit reservation program; therefore, no graduate courses taken before admission to the program may be applied to the M.S. Mathematics degree.

The Master of Science in Mathematical Sciences includes 12 hours of core courses from a specified emphasis area, 18 hours of MATH or STAT electives, as well as either the Thesis or Non-Thesis option (6 hours) for a total of 36 hours. For more details, see below.

Core Courses (12 hours)

Choose ONE emphasis area

Applied Mathematics

- MATH 7350 - Mathematical Statistics I
- MATH 7311 - Advanced Linear Algebra
- MATH 7323 - Advanced Numerical Analysis I
- MATH 7322 - Advanced Differential Equations

Applied Statistics

- MATH 7350 - Mathematical Statistics I
- MATH 7311 - Advanced Linear Algebra
- MATH 7351 - Mathematical Statistics II
- STAT 7340 - Advanced Statistical Methods I

Collegiate Mathematics Education

- MATH 7350 - Mathematical Statistics I
- MATH 7311 - Advanced Linear Algebra
- MATH 7390 - Teaching Collegiate Math
- MATH 5361 - History of Mathematics I

Elective Courses (18 hours)

Students must take 18 hours of graduate level MATH or STAT courses. Students may use up to six hours of graduate level courses as electives in a related area with approval from adviser and graduate coordinator.

Thesis or Non-Thesis Option (6 hours) Thesis Option

- 6 hours of MATH 7396 Master's Research Project OR 6 hours of MATH 7395 Research Project in Collegiate Math Education (for Collegiate Math Ed track only).

- Two comprehensive exams chosen from two of the four core courses as determined by his/her adviser after 18 hours are completed. Courses must be completed prior to examinations.

- Thesis is written according to Graduate School Guidelines and is defended in front of committee last semester of study.

- Must have completed 18 hours of coursework and have agreement of faculty member to direct research.

Non-Thesis Option

- 6 hours of graduate level MATH or STAT courses.

- Two comprehensive exams chosen from two of the four core courses as determined by his/her adviser during last semester of study (offered in February and April). Courses must be completed prior to examinations.

- Oral presentation from student's area of specialization along with a question and answer session derived from the student's course work.

Graduate Assistantships

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

Graduation Requirements

- Successful completion of an approved program of study.

- Pass both the written and oral comprehensive exams.

Mathematical Sciences, Applied Statistics, M.S.

Mathematical Sciences

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, and Collegiate Mathematics Education. 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

Students may be admitted to the program for **regular admission** with the following:

- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of 2.70 (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.

Students with an undergraduate cumulative GPA between 2.0 and 2.69, or a a GPA between 2.7 and 3.0 in their last 60 hours may petition the department for consideration for **special conditional admission**. Applicants must discuss and provide evidence regarding two or more of the following criteria as part of their petition:

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- Amount of time elapsed since the previous degree (5+ years preferred)

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- Professional accomplishments that demonstrate the applicant's abilities with respect to time management or focused, intensive study

- Extraordinary circumstances related to the overall low GPA

Applicants whose petitions are approved by the department must maintain a GPA of 3.0 or higher in their first 9 hours of coursework in order to remain in the program. Special conditionally admitted students may also be subject to other conditions for enrollment, such as required courses in the first 9 hours of study as specified by the admissions committee. Special conditionally admitted students completing their M.S. coursework with a GPA of 3.0 or higher after their first 9 credit hours will become regularly admitted.

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ADMISSIONS

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Undergraduate students may apply and be accepted provisionally into the M.S. Mathematics graduate program any time after completing 75 or more hours of undergraduate course work. However, at least 90 hours of undergraduate course work must have been completed by the time the first graduate Mathematics course is taken.

All applicants must have at least a 3.2 overall GPA and at least a 3.5 major GPA to be considered. Students who have transferred to our program can participate provided their relevant transfer course work (i.e. courses taken at other institutions that are being used to meet our B.S./B.A. requirements) also meets the 3.2 minimum GPA criteria and 3.5 minimum major GPA criteria. The GRE requirement is waived for students with an overall 3.5 GPA or higher. Students with an overall GPA between 3.2 and 3.49 must apply using the GRE option.

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If, at the end of the student's baccalaureate degree, an Early Entry B.S./B.A. to M.S. student has failed to meet the Graduate School admission requirement of 2.7 overall undergraduate GPA, the student will be dismissed from the M.S. Mathematics program.

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- Two letters of recommendation, one of which must be from a university faculty member in the Department of Mathematics and Statistics (letters are to be submitted directly by recommenders)

- Portfolio of work in mathematics courses (optional)

Submit your application to the Early Entry B.A./B.S. to M.S. Program Coordinator.

PROGRAM RESTRICTIONS

To ensure that they follow the proper degree plan, students must meet with the M.S. Mathematics graduate coordinator upon acceptance to the Early Entry B.A./B.S. to M.S. program to map out and approve the graduate courses they will take. Accepted students will have provisional status in the graduate program, pending the award of the baccalaureate degree. Students accepted into the Early Entry B.A./B.S. to M.S. program will be subject to the same policies as traditionally matriculated M.S. Mathematics

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- Thesis is written according to Graduate School Guidelines and is defended in front of committee last semester of study.

- Must have completed 18 hours of coursework and have agreement of faculty member to direct research.

Non-Thesis Option

- 6 hours of graduate level MATH or STAT courses.
- Two comprehensive exams chosen from two of the four core courses as determined by his/her adviser during last semester of study (offered in February and April). Courses must be completed prior to examinations.
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Thesis Option
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- Thesis is written according to Graduate School Guidelines and is defended in front of committee last semester of study.

- Must have completed 18 hours of coursework and have agreement of faculty member to direct research.

Non-Thesis Option

- 6 hours of graduate level MATH or STAT courses.

- Two comprehensive exams chosen from two of the four core courses as determined by his/her adviser during last semester of study (offered in February and April). Courses must be completed prior to examinations.

- Oral presentation from student's area of specialization along with a question and answer session derived from the student's course work.

Graduate Assistantships

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

Graduation Requirements

- Successful completion of an approved program of study.

  Pass both the written and oral comprehensive exams

Applied Statistics Graduate Certificate

The Graduate certificate in Applied Statistics program provides training and certification for students and working professionals to gain knowledge in statistics. It is a 15 credit hours program that focuses on the fundamental concepts, application and technology of statistical methods and SAS training.

Admission Requirements

- Baccalaureate degree from an accredited institution with a cumulative undergraduate GPA of at least 3.0

- MATH 1451 (calculus I) and STAT 3352 (Applied Statistics I) or equivalent

Students with cumulative GPA of less than 3.0 may be admitted conditionally to the program.

Early Entry Admission

The Early Entry Program for a Graduate Certificate in Applied Statistics is intended to serve as a fast path for completing a baccalaureate degree and a Graduate Certificate in Applied Statistics, condensing what would normally be about five years of study into about four years of study. By accelerating the completion of the baccalaureate degree and the Graduate Certificate, students will jumpstart their careers as professionals and could continue on to a master's degree. An Early Entry Program for the Graduate Certificate in Applied Statistics will make graduate education more accessible and affordable to students interested in pursuing advanced studies in statistics, as well as make them more employable with a specialty certificate.

Early Entry Admission Requirements

- Undergraduate students may apply and be accepted any time after completing 75 hours or more of undergraduate coursework. However, at least 90 hours of undergraduate coursework must have been completed by the time the first graduate course is taken.

- All applicants must have at least a 3.2 overall GPA at UA Little Rock in order to be considered. Students who have transferred to our program can participate in the Early Entry Program provided their relevant transfer coursework (i.e., courses taken at other institutions that are being used to meet our baccalaureate degree requirements) also meets the 3.2 minimum GPA criteria.

- All applicants must have taken Calculus I MATH 1451 and Applied Statistics I STAT 3352 or equivalent with a C or higher.

- All applicants must complete an application and be accepted into the Graduate Certificate in Applied Statistics program and Graduate School.

- All applicants must complete an Early-Entry Program form and be approved for admission by the Department of Mathematics and Statistics graduate coordinator. The Department of Mathematics and Statistics Graduate Coordinator's decision is final and cannot be appealed. The Early Entry form must be approved by the Department of Mathematics and Statistics Graduate Coordinator before the student begins graduate coursework. Failure to obtain prior approval negates the ability to "double count" courses.

- If, at the end of the student's baccalaureate degree, a Graduate Certificate in Applied Statistics student has failed to meet the Graduate School admission requirement of a 2.7 overall undergraduate GPA, the student will be dismissed from the Graduate Certificate in Applied Statistics program.

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.

Clinton School of Public Service

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 common, 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 and EMPS 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 nonresident 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.

Master of Public Service
Public Service, M.P.S.

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
- CSPS 7201 - Ethical and Legal Dimensions of Public Service
- CSPS 7223 - Foundations of Public Service
- CSPS 7303 - Communication and Social Exchange
- CSPS 7331 - The Theory and Practice of Global Development
- CSPS 7333 - Program Planning and Development
- CSPS 7334 - Program Evaluation
- CSPS 7335 - Field Research in Public Service

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
- CSPS 7313 - Dynamics and Complexities of Social Change

Field Service Projects

- CPSP 7240 - Practicum I
- CPSP 7340 - Practicum II
- CPSP 7320 - Capstone
- CPSP 7330 - International Public Service Project

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 MPS/JD

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.

Concurrent, MPS/MPH

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.

Concurrent, MPS/MBA

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.

Executive Master of Public Service

The EMPS degree is designed for mid-career public service professionals. It requires a total of 36 hours, completed in 8-week long "semesters" over a 2-year period, and is offered solely online. It consists of the 11 following courses, plus one 3-hour elective.

Required Courses

- CSPS 7303 - Communication Processes
- CSPS 7314 - Advocacy in Public Service
- CSPS 7315 - Data Analysis
- CSPS 7321 - Organization Case Study
- CSPS 7323 - Leadership in Public Service
- CSPS 7324 - Foundations of Public Service
- CSPS 7325 - Legal and Ethical Issues in Public Service

- CSPS 7326 - Philanthropy Leadership and the Non-Profit Sector
- CSPS 7333 - Program Planning and Development
- CSPS 7334 - Program Evaluation
- CSPS 7335 - Field Research Methods

Courses

Accounting

ACCT 5322 - Federal Taxation II

Three credit hours.

MBA or MS in BISA Elective. Prerequisite: ACCT 3321 with C or higher. Federal income tax topics related to partnerships and partners, corporations and shareholders, trusts and estates, research methods in tax practice, survey of the unified estate and gift tax law.

ACCT 5352 - Advanced Auditing

Three credit hours.

Two primary areas are explored: Techniques for auditing more effectively and efficiently, and extending auditing skills to other professional services. The course relies heavily on instructor-led student research and case analyses.

Prerequisites: Acct 4351 or consent of instructor

ACCT 5381 - Legal, Regulatory and Ethical Environment for Accountants

Three credit hours.

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.

Prerequisites: MKTG 2380 – Legal Environment of Business (or equivalent) with a grade of C or greater.

ACCT 7100 - Accounting Methods and Report

One credit hours.

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 BISA or Pre-MS in BISA programs.

ACCT 7199 - Independent Study

One credit hour.

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.

Prerequisites: A GPA of at least 3.0, at least 12 graduate credits, and consent of department.

ACCT 7299 - Independent Study

Two credit hours.

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.

Prerequisites: A GPA of at least 3.0, at least 12 graduate credits, and consent of department.

ACCT 7304 - Accounting for Managerial Decision-Making

Three credit hours.
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.).

Prerequisites: Principles of Accounting I and II (ACCT 2310 and 2330) or ACCT 7100 and passing score on accounting assessment.

ACCT 7305 - Analysis of Financial Statements

Three credit hours.

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 or the MST.

Prerequisites: ACCT 7304 with a grade of B or greater.

ACCT 7320 - Tax Planning for Business Decisions

Three credit hours.

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.

Prerequisites: ACCT 3321 with a grade of C or greater.

ACCT 7330 - Managerial Accounting for Information Systems Specialists

Three credit hours.

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 master's programs in accountancy or taxation.

Prerequisites: Principles of Accounting I and II (ACCT 2310 and 2330) or ACCT 7100 and passing score on accounting assessment.

ACCT 7340 - International Accounting

Three credit hours.

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.

Prerequisites: ACCT 3311 and ACCT 3312, each with a grade of C or greater.

ACCT 7355 - Research in Federal Taxation

Three credit hours.

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.

Prerequisites: ACCT 3321 – Federal Taxation with a grade of C or greater.

ACCT 7356 - Federal Corporate Taxation

Three credit hours.

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.

Prerequisites: 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: ACCT 7355 is permitted.

ACCT 7360 - Taxation of Pass-Through Entities

Three credit hours.

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.

Prerequisites: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater.

Concurrent: ACCT 7355 is permitted.

ACCT 7361 - Advanced Topics in Auditing

Three credit hours.

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.

Prerequisites: ACCT 3341, 4351, or their equivalent, each with a grade of C or greater.

ACCT 7362 - Advanced Topics in Accounting Information Systems

Three credit hours.

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.

Prerequisites: ACCT 3341 and 4351 (or equivalents) each with a grade of C or greater.

ACCT 7363 - Accounting Theory and Research

Three credit hours.

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.

Prerequisites: ACCT 4351 (or equivalent) with a grade of C or greater.

ACCT 7364 - Advanced Topics in Managerial Accounting

Three credit hours.

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.

Prerequisites: ACCT 3330 and 3341 (or equivalents) with a grade of C or greater.

ACCT 7365 - State and Local Taxation

Three credit hours.

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.

Prerequisites: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater.

Concurrent: ACCT 7355 is permitted.

ACCT 7368 - Advanced Governmental and Not-for-Profit Accounting

Three credit hours.

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.

Prerequisites: ACCT 3361 with a grade of C or greater.

ACCT 7369 - International Taxation

Three credit hours.

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.

Prerequisites: ACCT 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: ACCT 7355 is permitted.

ACCT 7370 - Estate and Gift Taxation

Three credit hours.

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.

Prerequisites: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater.

Concurrent: ACCT 7355 is permitted.

ACCT 7371 - Federal Tax Accounting

Three credit hours.

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.

Prerequisites: ACCT 7367 or 5323 or ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater.

Concurrent: ACCT 7355 is permitted.

ACCT 7372 - Federal Tax Practice and Procedure

Three credit hours.

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.

Prerequisites: ACCT 7367 or 5323 or ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater.

Concurrent: ACCT 7355 is allowed.

ACCT 7373 - Forensic Acct & Fraud Audit

Three credit hours.

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.

Prerequisites: ACCT 4351 or Equivalent

ACCT 7399 - Independent Study

Three credit hours.

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.

Prerequisites: A GPA of at least 3.0, at least 12 graduate credits, and consent of department.

ACCT 8300 - Seminar in Current Topics

Three credit hours.

Topics of current importance and interest in accounting. Open to MBA students and to students in the graduate accounting and taxation programs.

Prerequisites: ACCT 4351 with a grade of C or greater, ACCT 5323 with a grade of B or greater, or consent of Department Chair.

Applied Communication

ACOM 5310 - Applied Communication Research

Three credit hours.

Examination of the applied role of communication research in a variety of contemporary organizations, using quantitative and/or qualitative approaches. Focus on identifying the practical applications of research for organizational members by completing a quantitative or qualitative research study. Dual listed in the Undergraduate Catalog as ACOM 4310. May be taken for both undergraduate and graduate credit.

ACOM 5311 - Organizational Communication

Three credit hours.

Students develop an ability to understand and apply major theories and concepts from communication theories to varied organizational contexts. Topics such as leadership, motivation, planned change, conflict, diversity, and decision making are explored through practical application to cases and during class activities. Dual listed in the Undergraduate Catalog as ACOM 4311. Cannot receive graduate level credit for class if taken for undergraduate credit.

ACOM 5312 - Intercultural Communication

Three credit hours.

An exploration of the relationship between communication and varied ethnic and national cultures across multiple contexts, including work, community, medical, and interpersonal. Topics such as culture shock, language, conflict, and cultural identity are explored. Class activities and case studies focused on developing competent and ethical application of major intercultural theories and concepts. Dual listed in the Undergraduate Catalog as ACOM 4312. Cannot receive graduate level credit for class if taken for undergraduate credit.

ACOM 5313 - Seminar: Studies in Communication

Three credit hours.

Investigation of specific communication theories, skills, and practices. Focus is on an in-depth treatment of a content area not typically represented in other courses in the major. May be repeated for credit. Dual listed in the Undergraduate Catalog as ACOM 4313. May be taken for both undergraduate and graduate credit, if on a different seminar topic.

ACOM 5323 - Family Communication

Three credit hours.

Study of communication phenomena in the family setting. Examination of how communication creates and influences the development, maintenance, and enhancement of family relationships. Case analysis and course activities focus on co-constructing family relationships with effective communication skills. Dual listed in the Undergraduate Catalog as ACOM 4323. Cannot receive graduate level credit for class if taken for undergraduate credit.

ACOM 5324 - Organizational Communication Seminar

Three credit hours.

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 indepth understanding of a specialized aspect of organizational communication.

Prerequisites: SPCH 5311.

ACOM 5326 - Transformations in Health Communication

Three credit hours.

This course introduces students to theories and issues in the field of health communication and personal transformation practices. The focus is on using in-class activities to better understand the dynamics of meanings of health and to develop effective personal-management skills.

ACOM 5326 - Transformations in Health Communication

Three credit hours.

This course introduces students to theories and issues in the field of health communication and personal transformation practices. The focus is on using in-class activities to better understand the dynamics of meanings of health and to develop effective personal-management skills. Dual-Listed in the Undergraduate Catalog as ACOM 4326

ACOM 5350 - Crisis Communication

Three credit hours.

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. Focus on media, image, and resiliency theories of crisis communication, and their practical implications for organizations. Cannot receive graduate level credit for class if taken for undergraduate credit. Dual listed in the Undergraduate Catalog as ACOM 4350.

ACOM 5357 - Communication and Managing Difference

Three credit hours.

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. Cannot receive graduate level credit for class if taken for undergraduate credit. Dual listed in the Undergraduate Catalog as ACOM 4357.

ACOM 7300 - Interpersonal Communication Concepts

Three credit hours.

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.

Prerequisites: graduate standing.

ACOM 7301 - Human Communication Theory

Three credit hours.

Introduction to communication field, with emphasis on specific theoretical frameworks used to co-construct positive change. As a result of this class, students will be able to explain/articulate key applied communication theoretic models and the value of them to create better social worlds.

ACOM 7302 - Interpersonal Communication: Theory and Context

Three credit hours.

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.

ACOM 7310 - Topics in Interpersonal Communication

Three credit hours.

Topics vary; chosen for interest, needs of current class; may include in-depth study of topics from earlier courses. Offered on demand.

ACOM 7311 - Small Group Communication

Three credit hours.

Systems study of small group formation, maintenance, performance; special attention to problem solving in groups.

ACOM 7312 - Intercultural Communication

Three credit hours.

Intercultural factors influencing human interaction; how cultures, subcultures interact verbally, non-verbally; how communication patterns are inherently culturally determined.

ACOM 7320 - Topics in Organizational Communication

Three credit hours.

Topics vary; chosen for interest, needs of current class; may include in-depth study of topics from earlier courses. Offered on demand.

ACOM 7321 - Organizational Communication Theory

Three credit hours.

Theoretic overview of organizational communication, includes communication flow, networks, organizational relationships, groups, conflict, language.

ACOM 7322 - Organizational Communication Culture Analysis

Three credit hours.

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.

ACOM 7323 - Conflict Analysis and Intervention

Three credit hours.

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.

ACOM 7324 - Negotiation

Three credit hours.

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.

ACOM 7330 - Communicating Change and Information Diffusion

Three credit hours.

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.

ACOM 7332 - Communication Assessment and Coaching

Three credit hours.

Methods used to assess communication behavior in organizations, prepare intervention techniques, evaluate communication effectiveness.

ACOM 7341 - Applied Communication Research

Three credit hours.

Role of applied research methods in developing effective communication in professional and personal settings. As a result of this class, students will be able to understand the research process used in applied communication studies from inception to implementation, including (a) choosing and narrowing a research topic, (b) researching the literature surrounding that topic, (c) justifying the need to research in a particular area, (d) formulating research questions & hypotheses, and (e) selecting appropriate methods to study that topic.

ACOM 7350 - Seminar in Effective Crisis Communication

Three credit hours.

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.

ACOM 7351 - Managerial Communication

Three credit hours.

Communication skills needed by supervisors, managers; focus on conflict management, interview skills (selection, performance appraisal, discipline, information gathering); includes theory, research, applied projects.

ACOM 7352 - Communication Training & Pedagogy

Three credit hours.

Development and delivery of a training project. Students prepare, facilitate, and assess the effectiveness of a workshop on a specific communication topic, using best practices in experiential learning.

ACOM 7390 - Introduction to Applied Communication Studies

Three credit hours.

Applied communication theories, terminology; program writing, presentation responsibilities; emphasis on research skills necessary for the field.

Prerequisites: program admission or consent of instructor. (Prerequisite course for entering students with fewer than 18 undergraduate speech hours; does not count toward degree requirements.)

ACOM 8300 - Communication Skill Center Internship

Three credit hours.

An opportunity to apply communication concepts and skills in a professional educational setting within the department. Graduate interns gain experience working in the Communication Skill Center, supervising undergraduate students, and developing, delivering, and assessing communication workshops.

Prerequisites: ACOM 7352 and consent of the instructor.

ACOM 8301 - Master's Research Paper

Three credit hours.

Students develop and complete their master's project on an applied communication research topic.

ACOM 8304 - Internship in Applied Communication

This course requires a minimum of 150 semester work hours for 3 or 300 semester work hours for 6 credit hours.

Job experience in an organization approved by the Applied Communication Department. Students may explore options through the Cooperative Education Office at UA Little Rock and/or through the Department's internship coordinator. Students apply relevant theories, develop interpersonal and organizational communication skills, meet regularly with their faculty member, and complete a paper reflecting on their experiences in light of communication theory.

Prerequisites: minimum of 6 hours in the program and consent of the instructor.

ACOM 8310 - Seminar in Applied Communication Studies

Three credit hours.

This capstone seminar draws on various applied communication theories to engage students in reflection on two years of study in the program. In doing so, students in the course will look at "what communication practices will create what we want to create," reflecting on how they (a) adapt messages to various audiences, genres, and contexts, (b) model positive and ethical communication, and (c) advocate for positive co-constructed communication practices. This class is intended to be taken in the last semester or year of study in the graduate program, as a student is analyzing data for their master's project.

ACOM 8600 - Communication Skill Center Internship

Six credit hours.

An opportunity to apply communication concepts and skills in a professional educational setting within the department. Graduate interns gain experience working in the Communication Skill Center, supervising undergraduate students, and developing, delivering, and assessing communication workshops.

Prerequisites: ACOM 7352 and consent of the instructor.

ACOM 8601 - Master's Research Paper

Six credit hours.

Students develop and complete their master's project on an applied communication research topic.

ACOM 8602 - Master's Thesis

Six credit hours.

Preparation of an appropriate original investigation demonstrating knowledge and methods of scholarship.

Prerequisites: successful completion of written comprehensive examinations.

ACOM 8604 - Internship in Applied Communication

This course requires a minimum of 150 semester work hours for 3 or 300 semester work hours for 6 credit hours.

Job experience in an organization approved by the Applied Communication Department. Students may explore options through the Cooperative Education Office at UA Little Rock and/or through the Department's internship coordinator. Students apply relevant theories, develop interpersonal and organizational communication skills, meet regularly with their faculty member, and complete a paper reflecting on their experiences in light of communication theory.

Prerequisites: minimum of 6 hours in the program and consent of the instructor.

Adult Education

ADED 5301 - Psychology of Adult Learning

Three credit hours.

This course explores research and research-based practice in adult learning and development. As a designated Adult Education Core Course, a grade of B or better is required.

Prerequisites: program admission or graduate standing.

ADED 5303 - Teaching Adults

Three credit hours.

This course explores best practices in designing learning experiences for adult students. As a designated Adult Education Core Course, a grade of B or better is required.

Prerequisites: program admission or graduate standing.

ADED 5304 - Methods and Materials in Adult Education

Three credit hours.

This course explores alternative methods of individual and group learning with emphasis on diversity issues, as well as selection and development of materials appropriate for adult learners.

Prerequisites: program admission or graduate standing.

ADED 7105 - Independent Study in Adult Education

Specific problems in adult education. Only three hours can count towards the degree; program students may take up to six hours. Offered on demand.

Prerequisites: advanced graduate standing, consent of advisor.

ADED 7205 - Independent Study in Adult Education

Two credit hours.

Specific problems in adult education. Only three hours can count towards the degree; program students may take up to six hours. Offered on demand.

Prerequisites: advanced graduate standing, consent of advisor.

ADED 7301 - Foundations of Adult Education

Three credit hours.

This course explores history and philosophies of adult education, with emphasis on change over time and distinctions with traditional K-16 education. As a designated Adult Education Core Course, a grade of B or better is required.

Prerequisites: program admission or graduate standing.

ADED 7302 - Organization and Administration of Adult Education

Three credit hours.

This course explores organizational procedures and administrative practices for implementation and maintenance of effective adult education programs.

Prerequisites: ADED 7301.

ADED 7303 - Program Planning in Adult Education

Three credit hours.

This course explores best practice models for planning, designing, implementing, and evaluating programs, with emphasis on practice program development.

Prerequisites: ADED 7301.

ADED 7304 - Teaching Reading to Adults

Three credit hours.

This course explores methods and materials for teaching reading to adults, with emphasis on the individual adult learner's needs.
Prerequisites: ADED 5303, ADED 7301.

ADED 7305 - Independent Study in Adult Education

Three credit hours.

Specific problems in adult education. Only three hours can count towards the degree; program students may take up to six hours. Offered on demand.

Prerequisites: advanced graduate standing, consent of advisor.

ADED 7307 - Internship

Three credit hours.

The internship is a minimum 420 clock-hours of practical experience in the candidate's specialization area. Repeatable for a total of nine hours.

Prerequisites: ADED 5301, ADED 5303, ADED 7301, ADED 7303, and instructor consent.

ADED 7308 - Seminar

Three credit hours.

This course explores recent developments in adult education research and practice having direct application to adult educators in public schools, continuing education, cooperative education, related agencies, and other programs. May be repeated with topic change up to three times.

Prerequisites: consent of the instructor.

Anthropology

ANTH 5155 - Forensic Anthropology Laboratory

One credit hour.

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.

Prerequisite or Corequisite: ANTH 5355.

ANTH 5301 - Anthropology of Death

Three credit hours.

Death is one of the few true human universals. However, there is tremendous temporal and cross-cultural variation in the attitudes toward and the practices associated with death. This class explores this variation from a holistic, anthropological viewpoint incorporating concepts from cultural anthropology, biological anthropology, and archaeology. Topics include medical versus social death, mourning practices, memorialization, and forms of burial. Cross listed as ANTH 4301.

ANTH 5310 - Urban Anthropology

Three credit hours.

A survey of urbanization throughout the world, with emphasis on urban adaptation of rural migrants and the phenomenon of urbanization in emerging nations.

ANTH 5313 - Race and Human Variation

Three credit hours.

This course explores the role of genetics, evolution, and adaptation in producing modern human biological variation. It will also focus on how this variation is/was interpreted around the world in general and in modern and historic North America in particular. We will explore the fallacy of biological race and the simultaneous importance of the cultural concept of race.

ANTH 5316 - Linguistic Anthropology

Three credit hours.

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 Required for majors.

ANTH 5320 - Sociocultural Change

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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. Examines the range of theories used to describe and explain variability in sociocultural phenomena.

ANTH 5398 - Special Topics in Anthropology

Three credit hours.

Selected topics in anthropology.

ANTH 5485 - Ethnographic Methods

Four credit hours.

Lecture, laboratory. Data-gathering methods, analyses in native or ethnic settings.

ANTH 5600 - Principles of Archaeological Research

Six credit hours.

Lecture, laboratory. Methods, theory; Arkansas prehistory, public archaeology.

ANTH 7300 - Seminar in Anthropology

Three credit hours.

Readings in professional literature and extensive discussions under faculty guidance. Course may be repeated for credit.

Prerequisites: graduate standing and permission of the instructor.

ANTH 7305 - Teaching Internship

Three credit hours.

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.

Prerequisites: consent of the instructor.

ANTH 7310 - Independent Study of Anthropology

Three credit hours.

Students engage in specialized instruction on an anthropological issue, which may take the form of field research, directed readings, library research, and/or practicum.

Prerequisites: consent of instructor.

Art Education

ARED 5194 - Independent Study in Art Education

One credit hour.

Research on a subject selected in consultation with the instructor. Offered in fall, spring, and summer.

Prerequisites: approval of art education advisor, consent of instructor.

ARED 5294 - Independent Study in Art Education

Two credit hours.

Research on a subject selected in consultation with the instructor. Offered in fall, spring, and summer.

Prerequisites: approval of art education advisor, consent of instructor.

ARED 5325 - Foundations of Art Education

Three credit hours.

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

ARED 5394 - Independent Study in Art Education

Three credit hours.

Research on a subject selected in consultation with the instructor. Offered in fall, spring, and summer.

Prerequisites: approval of art education advisor, consent of instructor.

ARED 7320 - Art Education for the Professional Artist I

Three credit hours.

Introductory study of art education theory and practice for teaching studio art in a university environment. Topics include curriculum development, instructional methods, and assessment strategies for adult learners.

ARED 7331 - Studio Experiences in Art Education

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

ARHA 4302 - Art History and Appreciation

Three credit hours.

Internship with a local art museum or similar organization, to include one or more of the following areas: curatorial, education, administrative.

Prerequisites: 6 hours of upper-level art history courses or permission of instructor.

ARHA 5110 - Special Topics in Art History

One credit hour.

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 5210 - Special Topics in Art History

Two credit hours.

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

Three credit hours.

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.

Prerequisites: Required for art history concentration.

ARHA 5302 - Art Museum Studies

Three credit hours.

Policy development, museum administration, staff management, operations funding, budgeting, collection organization, program design. Offered in spring on odd years.

ARHA 5305 - Italian Renaissance Art

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Painting, architecture, sculpture in 18th-19th-century Europe. Offered in fall on odd years.

ARHA 5308 - Art Since 1945

Three credit hours.

Major artists, movements; emphasis on 1945 to present; importance of new materials, techniques; critic's role.

ARHA 5309 - A History of Arkansas Architecture

Three credit hours.

Development of architecture in Arkansas from origins through contemporary period.

ARHA 5310 - Special Topics in Art History

Three credit hours.

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 5315 - Modern Architecture

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Painting, sculpture, graphic arts, architecture from Post- Impressionist period until World War II. Offered in spring on even years.

ARHA 7197 - Special Problems in Art History

One credit hour.

Content, length varies.

Prerequisites: graduate standing, consent of instructor.

ARHA 7297 - Special Problems in Art History

Two credit hours.

Content, length varies.

Prerequisites: graduate standing, consent of instructor.

ARHA 7303 - Seminar in Modern Architecture

Three credit hours.

Personalities, theories, styles of specific 18th-, 19th-, and 20th-century architects.

ARHA 7315 - Seminar in Italian Renaissance and Baroque Art

Three credit hours.

Directed reading, research on selected topics in Italian Renaissance, Baroque art.

ARHA 7316 - Seminar in Northern European Renaissance and Baroque Art

Three credit hours.

Directed reading, research on selected topics in Northern European art.

ARHA 7327 - Seminar in 19th-Century Art

Three credit hours.

Directed study, seminar presentations on topics in 19th-century painting, sculpture, architecture.

ARHA 7328 - Seminar in 20th-Century Art

Three credit hours.

Selected problems in 20th-century art.

ARHA 7397 - Special Problems in Art History

Three credit hours.

Content, length varies.

Prerequisites: graduate standing, consent of instructor.

ARHA 7398 - Internship in Museum Studies

Three credit hours.

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.

Prerequisites: 21 graduate hours, consent of coordinator.

ARHA 7399 - Thesis

Three credit hours.

May be repeated once for credit. Offered fall and spring.

Prerequisites: 24 graduate hours. (Required for art history concentration.)

ARST 5115 - Advanced Problems in Design

One credit hour.

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 5215 - Advanced Problems in Design

Two credit hours.

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 5315 - Advanced Problems in Design

Three credit hours.

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 7171 - Integrative Practice I

One credit hour.

Combination critique, guest artist lectures, studio visits, and discourse on current event art topics. Attendance at all Art + Design openings and lectures and three off-campus art events is required. Participation in all Art + Design workshops is expected. Submission of work to a minimum of three calls-for-art or portfolio reviews is required. Offered in fall and spring.

ARST 7172 - Integrative Practice II

One credit hour.

Combination critique, guest artist lectures, studio visits, and discourse on current event art topics. Attendance at all Art + Design opening and lectures and three off-campus art events is required. Participation in all Art + Design workshops is expected. Submission of work to a minimum of three calls-for-art or portfolio reviews is required. Offered in fall and spring.

Prerequisites: ARST 7171 and instructor approval.

ARST 7173 - Integrative Practice III

One credit hour.

Combination critique, guest artist lectures, studio visits, and discourse on current event art topics. Attendance at all Art + Design opening and lectures and three off-campus art events is required. Participation in all Art + Design workshops is expected. Submission of work to a minimum of three calls-for-art or portfolio reviews is required. Offered in fall and spring.

Prerequisites: ARST 7172 and instructor approval.

ARST 7297 - Special Problems

Two credit hours.

Content, length varies.

Prerequisites: graduate standing; consent of coordinator, instructor.

ARST 7311 - Graduate Studio I

Three credit hours.

First of four consecutive studio courses in the M.A. in Art/Visual Art Program. Individual research in consultation with instructors and area faculty; emphasis on personal expression and content of work. Required number of substantive pieces completed under faculty supervision/advisement. Up to six hours may be taken concurrently. Offered in fall and spring.

Prerequisites: admission to M.A. in Art/Visual Art, departmental, and instructor approval.

ARST 7312 - Graduate Studio II

Three credit hours.

Continuation of ARST 7311. At the completion of this course the student's M.A. committee votes to determine if the student may advance to ARST 7313. Offered in fall and spring.

Prerequisites: ARST 7311, department and instructor approval.

ARST 7313 - Graduate Studio III

Three credit hours.

Continuation of ARST 7312. Offered in fall and spring.

Prerequisites: ARST 7312 and department and instructor approval.

ARST 7314 - Graduate Studio IV

Three credit hours.

Continuation of ARST 7313. Offered in fall and spring.

Prerequisites: ARST 7313 and department and instructor approval.

ARST 7357 - 30-Hour Project & Exhibition

Three credit hours.

Students are guided through presentation of the artwork for exhibition, producing a written artist statement on the exhibited work, presentation of a public lecture and defense of artwork, professional portfolio presentation, and professional practices. The final project will culminate in an exhibition in one of the University Galleries or another approved venue. fall and spring.

Prerequisites: Departmental approval near completion of 30 graduate credit hours.

ARST 7377 - Graduate Field Study

Three credit hours.

This course allows students to conduct approved coursework at other institutions during summer semesters.

Prerequisites: ARST 7312 and departmental approval.

ARST 7378 - Graduate Internship

Three credit hours.

This course allows students to conduct an approved internship with an appropriate artist, designer, or institution. Minimum internship hours are 120.

Prerequisites: ARST 7311 and departmental approval.

ARST 7397 - Special Problems

Three credit hours.

Content, length varies.

Prerequisites: graduate standing; consent of coordinator, instructor.

ARST 7399 - Thesis

Three credit hours.

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.

Applied Science

ASCI 5310 - Introduction to Signal Processing

Three credit hours.

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.

Prerequisites: MATH 3322 or equivalent.

ASCI 5315 - Advanced Dynamics I

Three credit hours.

Kinematics of translating and rotating vectors. Dynamics of systems of particles and rigid bodies. Angular momentum. Newtonian mechanics. Lagrangian mechanics. Examples drawn from the fields of robotics, vehicle motion, and planetary motion.

Prerequisites: MATH 2453.

ASCI 5355 - Elastic Wave Theory

Three credit hours.

Elasticity theory developed as a basic necessity to the theory of seismology. Analysis of stress and infinitesimal strain. Perfect elasticity. Equation of motion in term of displacement. Vibration and waves. Theories of body and surface waves. Ray theory and energy partition.

Prerequisites: MATH 1451, MATH 1452, MATH 2453 and MATH 3322.

ASCI 5360 - Potential Theory

Three credit hours.

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.

Prerequisites: MATH 1451, MATH 1452, MATH 2453 and MATH 3322.

ASCI 7118 - Research Ethics in Science and Eng.

One credit hour.

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 - Introduction to Research in Applied Science

One credit hour.

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. Offered on demand.

ASCI 7189 - Research in Instrumentation

One credit hour.

Design, research in basic, applied instrumentation; requires laboratory research project involving instrumentation characterization or development. F, S.

ASCI 7190 - Applied Science Seminar

One credit hour.

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.

Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator.

ASCI 7191 - Cooperative Education in Applied Science

One credit hour.

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 cannot be used for credit toward the requirements for an applied science degree. The course may be repeated for credit.

Prerequisites: 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.

ASCI 7192 - Biosciences and Bioinformatics Seminar

One credit hour.

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 as BINF 7192.

Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator.

ASCI 7245 - Introduction to Research in Applied Science

Two credit hours.

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. Offered on demand.

ASCI 7289 - Research in Instrumentation

Two credit hours.

Design, research in basic, applied instrumentation; requires laboratory research project involving instrumentation characterization or development. F, S.

ASCI 7291 - Cooperative Education in Applied Science

Two credit hours.

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 cannot be used for credit toward the requirements for an applied science degree. The course may be repeated for credit.

Prerequisites: 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.

ASCI 7295 - Practical Topics in Science Management

Two credit hours.

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 if interest to all participating in science and engineering projects. Cross listed as BINF 7295.

ASCI 7307 - Smart Materials

Three credit hours.

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.

Prerequisites: ASCI 4320 or equivalent.

ASCI 7317 - Nano-structural Materials: Physical and Chemical Properties

Three credit hours.

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.

Prerequisites: SYEN 3372 or PHYS 4340 or CHEM 4340 or equivalent.

ASCI 7318 - Micro- and Nano-Fabrication

Three credit hours.

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.

Prerequisites: Consent of instructor.

ASCI 7340 - Applied Instrumental Optics

Three credit hours.

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

Three credit hours.

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.

Prerequisites: ASCI 7340 or equivalent.

ASCI 7344 - Plant Hormonal Biology

Three credit hours.

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 cross-talks between different phytohormones will be highlighted. Special attention will be given to regulation of biosynthesis of phytohormones for biotechnological applications and agriculture.

ASCI 7345 - Introduction to Research in Applied Science

Three credit hours.

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. Offered on demand.

ASCI 7355 - Introduction to Geophysics

Three credit hours.

Application of geology and geophysics to study the interior of the earth and the development of its surface features.

Prerequisites: MATH 1451.

ASCI 7365 - Advanced Seismology

Three credit hours.

Analysis of seismic waves in a uniform medium from a pressure pulse in a spherical cavity. Solution to Sharpe's problem using Laplace Transform. Wave propagation from sources in layered medium of different physical conditions. Numerical integration of equation of motion. Seismometry. Foca-mechanism and source characteristics. Internal structure of the earth. Nuclear testing and other explosions. Offered in spring.

Prerequisites: MATH 3322.

ASCI 7375 - Biochemistry of Biological Molecules

Three credit hours.

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.

Prerequisites: introductory biochemistry course or permission of the instructor.

ASCI 7380 - Biomedical Instrumentation

Three credit hours.

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 bioinstrumentation design; requires laboratory assignments, major laboratory project. Offered on demand.

ASCI 7381 - Physiological Measurement Techniques

Three credit hours.

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. Offered on demand.

ASCI 7385 - Concepts in Genetic Analysis

Three credit hours.

Methods of genetic analysis including mutant isolation, genetic and physical mapping, receptors genetics, evolutionary mechanisms, molecular variation and genomic evolution.

Prerequisites: introductory undergraduate genetics or molecular biology course.

ASCI 7389 - Research in Instrumentation

Three credit hours.

Design, research in basic, applied instrumentation; requires laboratory research project involving instrumentation characterization or development. F, S.

ASCI 7391 - Cooperative Education in Applied Science

Three credit hours.

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 cannot be used for credit toward the requirements for an applied science degree. The course may be repeated for credit.

Prerequisites: 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.

ASCI 7399 - Special Topics in Applied Science

Three credit hours.

Detailed study in applied science and related areas; may be lecture or lecture and laboratory, depending on specific topics. Offered on demand.

ASCI 7405 - Principles of Analytical Instrumentation

Four credit hours.

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

Four credit hours.

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 - Master's Thesis

One credit hours.

Prerequisites: consent of advisor.

ASCI 8200 - Master's Thesis

Two credit hours.

Prerequisites: consent of advisor.

ASCI 8300 - Master's Thesis

Three credit hours.

Prerequisites: consent of advisor.

ASCI 8400 - Master's Thesis

Four credit hours.

Prerequisites: consent of advisor.

ASCI 8500 - Master's Thesis

Five credit hours.

Prerequisites: consent of advisor.

ASCI 8600 - Master's Thesis

Six credit hours.

Prerequisites: consent of advisor.

ASCI 9100 - Doctoral Research/Dissertation

One credit hour.

Prerequisites: consent of advisor.

ASCI 9200 - Doctoral Research/Dissertation

Two credit hours.

Prerequisites: consent of advisor.

ASCI 9300 - Doctoral Research/Dissertation

Three credit hours.

Prerequisites: consent of advisor.

ASCI 9400 - Doctoral Research/Dissertation

Four credit hours.

Prerequisites: consent of advisor.

ASCI 9500 - Doctoral Research/Dissertation

Five credit hours.

Prerequisites: consent of advisor.

ASCI 9600 - Doctoral Research/Dissertation

Six credit hours.

Prerequisites: consent of advisor.

ASCI 9700 - Doctoral Research/Dissertation

Seven credit hours.

Prerequisites: consent of advisor.

ASCI 9800 - Doctoral Research/Dissertation

Eight credit hours.

Prerequisites: consent of advisor.

ASCI 9900 - Doctoral Research/Dissertation

Nine credit hours.

Prerequisites: consent of advisor.

Astronomy

ASTR 5301 - Astrophysics

Three credit hours.

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 extragalatic astronomy. This course is not open to students with credit for ASTR 4301. Dual listed in the Undergraduate Catalog as ASTR 4301.

Prerequisites: PHYS 2322 required. ASTR 2300 recommended, but not required.

Bioinformatics

BINF 5445 - Bioinformatics Theory and Applications

Three hours lecture. Two hours laboratory per week. Four credit hours.

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. Dual-listed in the Undergraduate Catalog as BINF 4445. Three hours of lecture and two hours laboratory per week. Four credit hours.

Prerequisites: Consent of instructor or the following: BINF 3345, BIOL 3300, IFSC 1202 or equivalents.

BINF 7145 - Introduction to Bioinformatics Research

One credit hours.

Rotations through the bioinformatics, biostatistics, information science, and/or life sciences research laboratories of faculty participating in the bioinformatics graduate program.

Prerequisites: permission of instructor.

BINF 7155 - Graduate Thesis

Variable credit of one to four credit hours.

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.

Prerequisites: Consent of thesis advisor.

BINF 7156 - Bioinformatics Capstone Project

Variable credit of one to four credit hours.

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.

Prerequisites: course director's permission.

BINF 7193 - Bioinformatics Seminar

One credit hour.

A survey of scientific and technical topics relevant to bio informaticists. 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.

Prerequisites: bioinformatics graduate student status or instructor's consent.

BINF 7199 - Special Topics in Bioinformatics

One credit hour.

Detailed study in bioinformatics and related areas; may be lecture or lecture and laboratory, depending on specific topics. Offered on demand.

Prerequisites: instructor's consent.

BINF 7245 - Introduction to Bioinformatics Research

Two credit hours.

Rotations through the bioinformatics, biostatistics, information science, and/or life sciences research laboratories of faculty participating in the bioinformatics graduate program.

Prerequisites: permission of instructor.

BINF 7255 - Graduate Thesis

Variable credit of one to four credit hours.

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.

Prerequisites: Consent of thesis advisor.

BINF 7256 - Bioinformatics Capstone Project

Variable credit of one to four credit hours.

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.

Prerequisites: course director's permission.

BINF 7295 - Practical Topics in Science Management

Two credit hours.

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 if interest to all participating in science and engineering projects. Cross listed as ASCI 7295.

BINF 7299 - Special Topics in Bioinformatics

Two credit hours.

Detailed study in bioinformatics and related areas; may be lecture or lecture and laboratory, depending on specific topics. Offered on demand.

Prerequisites: instructor's consent.

BINF 7355 - Graduate Thesis

Three credit hours.

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.

Prerequisites: Consent of thesis advisor.

BINF 7356 - Bioinformatics Capstone Project

Variable credit of one to four credit hours.

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.

Prerequisites: course director's permission.

BINF 7399 - Special Topics in Bioinformatics

Three credit hours.

Detailed study in bioinformatics and related areas; may be lecture or lecture and laboratory, depending on specific topics. Offered on demand.

Prerequisites: instructor's consent.

BINF 7455 - Graduate Thesis

Variable credit of one to four credit hours.

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.

Prerequisites: Consent of thesis advisor.

BINF 7456 - Bioinformatics Capstone Project

Variable credit of one to four credit hours.

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.

Prerequisites: course director's permission.

BINF 7499 - Special Topics in Bioinformatics

Four credit hours.

Detailed study in bioinformatics and related areas; may be lecture or lecture and laboratory, depending on specific topics. Offered on demand.

Prerequisites: instructor's consent.

BINF 8445 - Bioinformatics Master's Capstone Project

Four credit hours.

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 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.

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.

BINF 9100 - Doctoral Research/Dissertation

One credit hour.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

BINF 9200 - Doctoral Research/Dissertation

Two credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

BINF 9300 - Doctoral Research/Dissertation

Three credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

BINF 9400 - Doctoral Research/Dissertation

Four credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Corequisites: Consent of advisor.

BINF 9500 - Doctoral Research/Dissertation

Five credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

BINF 9600 - Doctoral Research/Dissertation

Six credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation. Cross listed as Consent of advisor.

BINF 9700 - Doctoral Research/Dissertation

Seven credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

BINF 9800 - Doctoral Research/Dissertation

Eight credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

BINF 9900 - Doctoral Research/Dissertation

Nine credit hours.

Bioinformatics doctoral research leading to Ph.D. dissertation.

Prerequisites: Consent of advisor.

Business Information Systems

BINS 5312 - Object-Oriented Programming

Three credit hours.

MS in BISA foundation course. Does not apply toward MS in BISA Core requirement or graduate BIS certificate programs. Beginning object-oriented programming course. Focus on business problem solving and solution development. Students with credit for BINS 4312 may not take BINS 5312 for additional credit.

BINS 5314 - Advanced Programming

Three credit hours.

This advanced object-oriented programming course focuses on development techniques for business applications using industry-standard tools and platforms. Students with credit for BINS 4314 cannot take this course for credit.

Prerequisites: C or better in BINS 4312/BINS 5312 or equivalent.

BINS 5350 - Business Database Management

Three credit hours.

MBA Elective, MS in BISA Prerequisite course. Does not apply toward MS in BISA 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

Three credit hours.

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.

Prerequisites: C or better in MGMT/BINS 4350/ BINS 5350 or equivalent or consent of instructor.

BINS 7250 - Strategic Mgmt. of IS & Tech

Two credit hours.

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.

Prerequisites: ACCT 7304, ECON 7313 and MGMT 7180.

BINS 7303 - Systems Development and Database Design

Three credit hours.

MS in BISA 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.

BINS 7304 - Business Applications for Decision Making

Three credit hours.

MS in BISA 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

Three credit hours.

MS in BISA Core Course or MBA Elective. Advanced concepts in database management, expanding from the relational data model to the multidimensional model, object-relational techniques, and web accessed data.

Prerequisites: MGMT 4350/MGMT 5350, BINS 4350/BINS 5350, or equivalent.

BINS 7307 - Systems Analysis and Design Methods

Three credit hours.

MS in BISA Core Course or MBA Elective. 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.

Prerequisites: MGMT 3307, BINS 3307, or equivalent.

BINS 7308 - Advanced Business Communication

Three credit hours.

MS in BISA Core Course or MBA Elective. Analysis of communication issues in the global sociotechnical environment. Assessment of organizational communication systems. Refinement of written and verbal communication competencies.

BINS 7309 - Cloud-Based Business Intelligence

Three credit hours.

MS in BISA 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

Three credit hours.

MBA or MS in BISA Elective. An overview of e-commerce technologies, including analysis of ecommerce infrastructure, technology, and managerial and implementation strategies. Focus on web development.

BINS 7350 - Information Systems Management

Three credit hours.

MBA and MS in BISA 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

Three credit hours.

MBA or MS in BISA 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

Three credit hours.

MS in BISA Core Course. MBA Elective. 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.

Prerequisites: BINS 7350 or equivalent.

BINS 7353 - Project Management

Three credit hours.

MS in BISA 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.

Prerequisites: BINS 7304, BINS 7305, BINS 7308, 7312, BINS 7350, and completion of or concurrent enrollment in ACCT 7330.

BINS 7385 - Internship

Three credit hours.

This course provides practical work experience, in a technology-related organizational setting, with new learning and professional growth.

Prerequisites: consent of instructor.

BINS 7398 - Seminar in Current Topics

Three credit hours.

MBA or MS in BISA Elective. Topics of current importance, interest in management.

Prerequisites: Consent of instructor.

Biology

BIOL 5199 - Special Topics in Biology

One credit hour.

Specialized areas of study in biological sciences. Credit varies with depth of content. Offered on demand.

Prerequisites: 20 biology hours, consent of instructor (other prerequisites may be required depending on topic).

BIOL 5299 - Special Topics in Biology

Two credit hours.

Specialized areas of study in biological sciences. Credit varies with depth of content. Offered on demand.

Prerequisites: 20 biology hours, consent of instructor (other prerequisites may be required depending on topic).

BIOL 5305 - Animal Behavior

Three credit hours.

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.

Prerequisites: BIOL 1401, 2403, eight additional biology hours or consent of instructor.

BIOL 5310 - Evolution

Three credit hours.

Basic principles of evolutionary biology: Darwinian Theory, principles of inheritance, microevolution, and speciation processes; includes the evolution of humans.

Prerequisites: four hours of the core science requirement, graduate standing.

BIOL 5311 - Neurobiology

Three credit hours.

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.

Prerequisites: 16 hours in biology or consent of instructor; CHEM 1401 or 1403 strongly encouraged.

BIOL 5312 - Population and Community Ecology

Three credit hours.

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 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.

Prerequisites: BIOL 3303 and at least junior standing.

BIOL 5314 - Soil Biology

Three hours lecture. Three credit hours.

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 open to students with credit for BIOL 4314. Dual listed in the Undergraduate Catalog as BIOL 4314. This course is not open to students with credit for BIOL 4314.

Prerequisites: BS in biology or permission of the instructor.

BIOL 5315 - Toxicology

Three hours lecture. Three credit hours.

Principles of toxicology are presented with an emphasis on toxicokinetic and toxicity mechanisms. Laboratory testing, risk analysis, and study design requirements are applied to various settings. Lectures will be supplemented with case studies. Open to students with credit for BIOL 4315. Dual listed in the Undergraduate Catalog as This course is not open to students with credit for BIOL 4315.

Prerequisites: BS in biology or permission of the instructor.

BIOL 5399 - Special Topics in Biology

Three credit hours.

Specialized areas of study in biological sciences. Credit varies with depth of content. Offered on demand.

Prerequisites: 20 biology hours, consent of instructor (other prerequisites may be required depending on topic).

BIOL 5401 - Cell Biology

Four credit hours.

A study of the organization of cells as related to the structure and function of biological molecules. Emphasis is placed on eukaryotic cells.

Prerequisites: BIOL 1402, 12 additional hours in biology, CHEM 1401 or 1403; microbiology is strongly encouraged.

BIOL 5403 - Comparative Physiology

Four credit hours.

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.

BIOL 5404 - Mammalogy

Four credit hours.

Classification, distribution, ecology, natural history of mammals; emphasis on Arkansas species; field studies, preparation of study specimens.

Prerequisites: Biology 3404, 3409, equivalent, or consent of instructor.

BIOL 5409 - Plant Taxonomy

Four credit hours.

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.

Prerequisites: BIOL 1400 or 1401 2402, or their equivalents.

BIOL 5411 - Ornithology

Three hours lecture. Weekend field trips and three hours laboratory per week. Four credit hours.

This course is designed to introduce students to selected aspects of avian biology. Emphasis is placed on ecology, evolutionary biology, natural history, and classification of birds. Dual listed in the Undergraduate Catalog as BIOL 5411.

Prerequisites: 16 hours in biology to include BIOL 2403.

BIOL 5412 - Plant Ecology

Three hours lecture. Two hours laboratory per week. Four credit hours.

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.

BIOL 5413 - Immunology

Three hours lecture. Two hours laboratory per week. Four credit hours.

Immunobiology and immunochemistry of humoral and cellular mechanisms of immunity.

BIOL 5415 - Biometry

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.

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.

BIOL 5416 - Microscopy

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.

Prerequisites: 15 hours of biology, graduate standing.

BIOL 5417 - Molecular Biology

Two hours lecture. Four hours laboratory per week.

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.

Prerequisites: nineteen hours in biology including both BIOL 2401 and BIOL 3300; CHEM 1401 or 1403; BS in biology or permission of instructor.

BIOL 5418 - Biotechnology

Two hours lecture. Four hours laboratory per week.

BIOL 3400 and 4401/BIOL 5401 are strongly recommended. BIOL 4417/BIOL 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.

Prerequisites: 19 hours of biology including 2401 and 3300; CHEM 1401 or 1403.

BIOL 5419 - Plant Physiology

Three hours lecture. Three hours laboratory per week. Four credit hours.

Study of water relations, nutrition, and metabolism including photosynthesis, growth, and development. Dual listed in the Undergraduate Catalog as BIOL 5419.

Prerequisites: BIOL 1400 or 1401, 2402, CHEM 2450, or their equivalents, or consent of instructor.

BIOL 5422 - Human Physiology

Three hours lecture. Three hours laboratory per week. Four credit hours.

General physiological principles and a treatment of functions and interrelations of human systems. Dual-listed in the UALR Undergraduate Catalog as BIOL 4422. Three hours lecture, three hours laboratory. Four credit hours.

BIOL 5426 - Plant and Human Nutrition

Four credit hours.

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 Undergraduate Catalog as hours lecture, and four hours laboratory per week.

Prerequisites: BS in Biology or permission of the instructor.

BIOL 5427 - Tissue Engineering

Four credit hours.

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. Open to students with credit for BIOL 4427. Dual listed in the Undergraduate Catalog as BIOL 4427. The course consists of two hours of lectures and four hours of laboratory per week. This course is not

Prerequisites: BS in Biology or the permission of the instructor.

BIOL 5499 - Special Topics in Biology

One to Four hours lecture. up to four hours laboratory per week. Four credit hours.

Specialized areas of study in biological sciences. Credit varies with depth of content. Offered on demand.

Prerequisites: 20 biology hours, consent of instructor (other prerequisites may be required depending on topic).

BIOL 7110 - Independent Study

One credit hour.

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

One credit hour.

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.

Prerequisites: graduate standing and consent of graduate coordinator.

BIOL 7199 - Selected Topics in Biology

Three hours lecture. One credit hour.

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 Offered on demand.

Prerequisites: Graduate standing or consent of instructor.

BIOL 7210 - Independent Study

Two credit hours.

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 7299 - Selected Topics in Biology

Three hours lecture. Two credit hours.

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 Offered on demand.

Prerequisites: Graduate standing or consent of instructor.

BIOL 7310 - Experimental Design in Biology

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.

Prerequisites: Graduate standing and 4415/BIOL 5415 Biometry or equivalent.

BIOL 7311 - Behavioral Ecology

Three hours lecture. Three credit hours.

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. Computer exercises during some scheduled lecture times will include foraging and habitat use models, game theory, and species interaction models.

Prerequisites: BIOL 3303, BIOL 4305/BIOL 5305 or the equivalent or consent of the instructor.

BIOL 7399 - Selected Topics in Biology

Three hours lecture.

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 Offered on demand.

Prerequisites: Graduate standing or consent of instructor.

BIOL 7410 - Phylogenetic Analysis

Two hours lecture. Four hours laboratory per week. Four credit hours.

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.

Prerequisites: Graduate standing and completion of two courses (or equivalent) from the following: Biometry (BIOL 4415/BIOL 5415), Linear Algebra (MATH 3312), Mathematical Models (MATH 3324), Molecular Biology (BIOL 4417/BIOL 5417), or Biotechnology (BIOL 4418/5418). Students may also enroll with the consent of the instructor.

BIOL 7499 - Selected Topics in Biology

Three hours lecture. Four credit hours.

Advanced studies in specialized areas of biological science, such as cell and molecular biology, microbiology, genetics, organismal biology, genetics, ecology, fisheries and wildlife management.

Prerequisites: Graduate standing or consent of instructor.

BIOL 8100 - Thesis Research

One credit hour.

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.

Prerequisites: full admission to the program.

BIOL 8200 - Thesis Research

Two credit hours.

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.

Prerequisites: full admission to the program.

BIOL 8300 - Thesis Research

Three credit hours.

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.

Prerequisites: full admission to the program.

BIOL 8400 - Thesis Research

Four credit hours.

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.

Prerequisites: full admission to the program.

Business

BSAD 7100 - Managing Your Career

One credit hour.

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 7385 - Business Internship

Three hours lecture. Three credit hours.

Prerequisite: Permission of graduate program adviser.

This course provides work experience in a professional business setting requiring practical application of advanced business concepts. This course is open to College of Business graduate students only.

Prerequisites: Permission of graduate program adviser.

BSAD 7395 - Cooperative Education

Three credit hours.

MBA Electives 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.

Prerequisites: all MBA foundation courses, 12 credits of MBA core courses and consent of the graduate program director.

Chemistry

CHEM 5120 - Biochemistry I Laboratory

One credit hour.

Laboratory techniques will involve identification of amino acids originating from peptides, evaluation of biological constituents using enzymes, measurement of protein concentrations, enzyme kinetic studies and separation of proteins by gel electrophoresis and other techniques. Dual listed in the Undergraduate Catalog as CHEM 4120. Laboratory three hours per week. One credit hour.

Prerequisites: CHEM 2310, 3351, either 3151 or 3250 with a grade of C or greater.

CHEM 5251 - Organic Preparations

Two credit hours.

Advanced experiments in organic chemistry using special apparatus and techniques. Two three-hour laboratories per week. Offered on demand.

Prerequisites: CHEM 3151 or 4250.

CHEM 5320 - Biochemistry I Lecture

three hours lecture. Three credit hours.

A basic course covering the chemistry of metabolism of proteins, lipids, carbohydrates, and nucleic acids and the action of vitamins, hormones, and enzymes. Dual listed in the Undergraduate Catalog as CHEM 4320.

Prerequisites: CHEM 3351 and either 3151 or 3250 with a grade of C or greater.

CHEM 5321 - Biochemistry II

three hours lecture. Three credit hours.

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 Undergraduate Catalog as CHEM 4321. Students who have completed CHEM 4321 may not enroll in CHEM 5321.

Prerequisites: CHEM 4420 or 5420.

CHEM 5330 - History of Chemistry

Three credit hours.

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 Undergraduate Catalog as CHEM 4330. Students who have completed CHEM 4330 may not enroll in CHEM 5330.

Prerequisites: CHEM 3350 with C or greater.

CHEM 5340 - Inorganic Chemistry

two hours lecture. three hours laboratory per week. Three credit hours.

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. Students who have completed CHEM 4340 may not enroll in CHEM 5340. Required for Required for BS major. Dual listed in the Undergraduate Catalog as CHEM 4340.

Prerequisite or Corequisite: CHEM 3340, and 3572 or 3371 (3371 may be taken as corequisite).

CHEM 5342 - Environmental Chemistry

three hours lecture. Three credit hours.

A survey of environmental chemistry. Topics covered will include: Composition of the atmosphere and behavior; energy and climate; principles of photochemistry and surfactants; harloorganics 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 Undergraduate Catalog as CHEM 4342 may not enroll in CHEM 5342.

Prerequisites: CHEM 3350 and CHEM 2310 with grade of C or greater.

CHEM 5350 - Intermediate Organic Chemistry

Three hours lecture. Three credit hours.

Reaction mechanisms; correlation of structure with reactivity; literature survey of recent advances in the field. Offered on demand.

Prerequisites: CHEM 3351.

CHEM 5360 - Medicinal Chemistry

three hours lecture. Three credit hours.

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. This course cannot be used as a substitute for the Biochemistry requirement of the ACS certified degree.

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.

CHEM 5380 - Introduction to Polymer Chemistry

Two hours lecture. Three hours laboratory per week. Three credit hours.

Coordination of theoretical, practical aspects; includes history, types of polymerizations, kinetics, molecular weight, physical properties including thermal and spectroscopic characterization, biopolymers, engineering resins. Offered in spring on even years.

Prerequisites: CHEM 3151 and 3351 or 4250 (recommended but not required: Chemistry 3170, 3271, 3371, 3470, 3572).

CHEM 5399 - Special Topics in Chemistry

Three hours lecture.

Topics may include chemical carcinogenesis, environmental chemistry, solid state chemistry, radiochemistry, macromolecules, surface chemistry, quantum chemistry, others. Offered on demand.

Prerequisites: consent of instructor.

CHEM 5411 - Instrumental Analysis

Three hours lecture. Four hours laboratory per week. Four credit hours.

Most common modern instrumental methods of analysis; includes topics in spectroscopy, electrochemistry, chromatography. Offered in fall.

Prerequisites: CHEM 2310 and 2311; PHYS 1322 or 2322.

CHEM 7190 - Graduate Seminar

One credit hours.

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.

Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator.

CHEM 7240 - Inorganic Preparations

Two credit hours.

Techniques of synthesis and identification of inorganic compounds. Six hours laboratory per week. Offered on demand.

Prerequisites: CHEM 4411/CHEM 5411 or equivalent.

CHEM 7311 - Advanced Analytical Chemistry

Three hours lecture. Three credit hours.

Complex solution equilibria and selected topics in spectroscopy, electro-analytical techniques, separations procedures.

Prerequisites: CHEM 4411/CHEM 5411 or equivalent.

CHEM 7317 - Selected Topics in Analytical Chemistry

Three credit hours.

Topics may include electro-analytical techniques, modern functional group analysis, instrumental design and control, others. Offered on demand.

Prerequisites: consent of instructor.

CHEM 7318 - Selected Topics in Analytical Chemistry

Three credit hours.

Topics may include electro-analytical techniques, modern functional group analysis, instrumental design and control, others. Offered on demand.

Prerequisites: consent of instructor.

CHEM 7319 - Selected Topics in Analytical Chemistry

Three credit hours.

Topics may include electro-analytical techniques, modern functional group analysis, instrumental design and control, others. Offered on demand.

Prerequisites: consent of instructor.

CHEM 7340 - Advanced Inorganic Chemistry

Three hours lecture. Three credit hours.

Advanced theoretical concepts; includes atomic structure, molecular and solid structures, bonding, ligand field theory, organometallic chemistry, metals chemistry, reaction mechanism.

Prerequisites: CHEM 4340/CHEM 5340 or equivalent.

CHEM 7347 - Selected Topics in Inorganic Chemistry

Three hours lecture. Three credit hours.

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. Offered on demand.

Prerequisites: CHEM 4340/CHEM 5340.

CHEM 7348 - Selected Topics in Inorganic Chemistry

Three hours lecture. Three credit hours.

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. Offered on demand.

Prerequisites: CHEM 4340/CHEM 5340.

CHEM 7349 - Selected Topics in Inorganic Chemistry

Three hours lecture. Three credit hours.

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. Offered on demand.

Prerequisites: CHEM 4340/CHEM 5340.

CHEM 7350 - Organic Reaction Mechanisms

Three hours lecture. Three credit hours.

Reaction mechanisms of classical organic reactions; includes ionic and free radical addition and substitution, oxidation, reduction, elimination reactions. Offered in fall.

Prerequisites: CHEM 3350 or equivalent, 3351 or equivalent.

CHEM 7351 - Modern Synthetic Reactions

Three hours lecture. Three credit hours.

Modern organic reactions, their applications in synthesis. Offered on demand.

Prerequisites: CHEM 3350 or equivalent, 3351 or equivalent.

CHEM 7357 - Selected Topics in Organic Chemistry

Three hours lecture. Three credit hours.

Topics may include natural products, stereochemistry, photochemistry, heterocyclic compounds, free radicals, carbenes, polymers, others. Offered on demand.

Prerequisites: CHEM 3350, 3351.

CHEM 7358 - Selected Topics in Organic Chemistry

Three hours lecture. Three credit hours.

Topics may include natural products, stereochemistry, photochemistry, heterocyclic compounds, free radicals, carbenes, polymers, others. Offered on demand.

Prerequisites: CHEM 3350, 3351.

CHEM 7359 - Selected Topics in Organic Chemistry

Three hours lecture. Three credit hours.

Topics may include natural products, stereochemistry, photochemistry, heterocyclic compounds, free radicals, carbenes, polymers, others. Offered on demand.

Prerequisites: CHEM 3350, 3351.

CHEM 7370 - Physical Principles of Chemical Reactivity

Three hours lecture. Three credit hours.

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. Offered in spring.

Prerequisites: CHEM 3371 or equivalent, 3470 or equivalent.

CHEM 7371 - Chemical Thermodynamics

Three hours lecture. Three credit hours.

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. Offered on demand.

Prerequisites: CHEM 3371, 3470.

CHEM 7372 - Chemical Kinetics

Three hours lecture. Three credit hours.

Chemical reaction rates; includes determination of empirical rate laws, collision and transition state theories, activation energy and catalysis, reaction mechanisms, kinetic intermediates. Offered on demand.

Prerequisites: CHEM 3371, 3470.

CHEM 7377 - Selected Topics in Physical Chemistry

Three hours lecture. Three credit hours.

Topics may include quantum chemistry, statistical thermodynamics, semi-empirical molecular orbital calculations, molecular spectroscopy and photochemistry, states of matter, mathematical methods in chemistry, others. Offered on demand.

Prerequisites: CHEM 3371, 3470.

CHEM 7378 - Selected Topics in Physical Chemistry

Three hours lecture. Three credit hours.

Topics may include quantum chemistry, statistical thermodynamics, semi-empirical molecular orbital calculations, molecular spectroscopy and photochemistry, states of matter, mathematical methods in chemistry, others. Offered on demand.

Prerequisites: CHEM 3371, 3470.

CHEM 7379 - Selected Topics in Physical Chemistry

Three hours lecture. Three credit hours.

Topics may include quantum chemistry, statistical thermodynamics, semi-empirical molecular orbital calculations, molecular spectroscopy and photochemistry, states of matter, mathematical methods in chemistry, others. Offered on demand.

Prerequisites: CHEM 3371, 3470.

CHEM 7390 - Selected Topics for Teachers

Two hours lecture. Three hours laboratory per week. Three credit hours.

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. Offered on demand.

Prerequisites: experience in teaching secondary science and/or consent of instructor (based on assessment of student's chemistry background).

CHEM 8100 - Thesis Research

One credit hour.

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. May not be applied to the MA degree. Required for Eleven hours Required for MS degree. Credit/no credit grade based on written progress reports.

Prerequisites: consent of coordinator, thesis advisor.

CHEM 8200 - Thesis Research

Two credit hours.

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. May not be applied to the MA degree. Required for Eleven hours Required for MS degree. Credit/no credit grade based on written progress reports.

Prerequisites: consent of coordinator, thesis advisor.

CHEM 8300 - Thesis Research

Three credit hours.

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. May not be applied to the MA degree. Required for Eleven hours Required for MS degree. Credit/no credit grade based on written progress reports.

Prerequisites: consent of coordinator, thesis advisor.

CHEM 8400 - Thesis Research

Four credit hours.

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. May not be applied to the MA degree. Required for Eleven hours Required for MS degree. Credit/no credit grade based on written progress reports.

Prerequisites: consent of coordinator, thesis advisor.

Construction Management and Construction Engineering

CNMG 5310 - Construction Financial Management

Two hours lecture. two hours laboratory per week. Three credit hours.

Concepts and principles of construction financial management: construction financial systems and transactions, financial statements, depreciation analysis, labor burden, overhead determination, bid profit margins, and profit center analysis. Spring only.

CNMG 5311 - Estimating II

Two hours lecture. two hours laboratory per week. Three credit hours.

Advanced applications and concepts of construction project estimating. Topics include compute-raided estimating, correcting estimating errors, labor and equipment productivity, risk adjustment to price, pricing by asset utilization, mark-up, and ethics. Students compete in mock bids on different types of construction projects. Spring only.

CNMG 5313 - Construction Management Fundamentals

Two hours lecture. two hours laboratory per week. Three credit hours.

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. Offered on demand.

CNMG 5315 - Construction Business Operations

Two hours lecture. two hours laboratory per week. Three credit hours.

Beginning with start-up, this course will study and participate in the operation of a medium-sized construction company through a fiscal year. Coursework will include daily, weekly, monthly, quarterly, and annual tasks. This course will cover portions of the Arkansas Contractor's Licensing requirements. Required for Required for the successful operation of a construction company. Fall only.

Prerequisites: This course will identify and explore the tasks

CNMG 5318 - Advanced Building Information Modeling

Three contact hours. Students with credit for CNMG 4318 cannot repeat CNMG 5318 for credit. Three credit hours.

Building information modeling (BIM) functions will be used for complex commercial construction; topographic information of sites, project datums, quantities and properties of building components, building sustainability analysis, documenting projects, and detailing MEP or structural designs; rendering of exterior and interior views.

Prerequisites: consent of instructor.

CNMG 5323 - Construction Administration

Two hours lecture. Two hours laboratory per week. Three credit hours.

An introduction to construction project control and administration through computer applications. Topics include project team development, standard agreements, contract documents utilization, record keeping, submittals, subcontract management, purchasing, expediting, change orders, claims, progress payments, closeout, and internet-based project control. Fall and spring.

Prerequisites: consent of instructor.

CNMG 5327 - Temporary Structures

Four contact hours. Students with credit for CNMG 4327 cannot repeat this course for credit. Three credit hours.

The study of engineering standards, designs, practices, and procedures for erecting temporary structures used to facilitate construction. Topics include earth-retaining structures, slurry walls, dewatering, underpinning, scaffolding, formwork, falsework and shoring, bracing and guying for stability.

Prerequisites: consent of instructor.

CNMG 5329 - Construction Planning and Scheduling

Three hours lecture. Three credit hours.

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. Dual listed in the Undergraduate Catalog as CNMG 4329. Students cannot receive graduate credit for CNMG 5329 if they have previously taken CNMG 4329.

Prerequisites: CNMG 4211 or equivalent.

CNMG 5334 - Construction Contracts and Law

Two hours lecture. Two hours laboratory per week. Three credit hours.

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. Fall and spring.

CNMG 5342 - Construction Safety

Two hours lecture. Two hours laboratory per week. Three credit hours.

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. Dual listed in the Undergraduate Catalog as CNMG 4342. Students cannot receive graduate credit for CNMG 5342 if they have previously taken CNMG 4342.

CNMG 5351 - Foundation Design

2 hours lecture. 2 hours laboratory per week. Three contact hours and Three credit hours.

The study of introductory soil mechanics including foundation design for shallow and deep foundations. Topics include ultimate bearing capacity, allowable bearing capacity, consolidation settlement, pile foundation for bearing and friction design, lateral earth pressures, soil improvement, and ground modification.

CNMG 5361 - Green Construction

Two hours lecture. Two hours laboratory per week. Three credit hours.

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. Spring only.

CNMG 5389 - Professional Engineering Licensure

Two hours lecture. Three hours laboratory per week. Three credit hours.

Legal, regulatory, and ethical issues related to the practice of engineering; preparation for engineering licensure examinations. Dual listed in the Undergraduate Catalog as CNMG 4389. Students cannot receive graduate credit for CNMG 5389 if they have previously taken CNMG 4389. Cross listed as SYEN 5389.

Prerequisite concurrent: Registration for the Fundamentals of Engineering exam, or consent of instructor.

CNMG 5399 - Special Topics

Three hours lecture. Three credit hours.

Designed to meet special needs of students or industry to cover the application of construction management specific problems.

CNMG 7100 - Independent Study

Three credit hours.

Students under faculty supervision, can explore advanced topics in rehabilitation counseling not normally covered in regular course offerings.

Prerequisites: graduate standing, consent of instructor.

Six credit hours.

CNMG 7189 - Internship

One credit hour.

An internship is a cooperative program between the Department of Construction Management and approved Experience Providers (employers). Professional internships correlate actual work experience in the building construction industry with the architecture and construction coursework. Internships approved by the department provide students with knowledge of career opportunities and actual work experience in preparation for employment after graduation. The length of time for your internship experience is intended to be approximately 150 working hours. Repeatable for up to 3 credits.

Prerequisites: 9 credit hours in the program.

CNMG 7200 - Independent Study

Two credit hours.

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.

CNMG 7300 - Independent Study

Three credit hours.

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

CNMG 7301 - American Construction Industry

Two hours lecture. Three hours laboratory per week. Three credit hours.

This course introduces students to the American construction industry, materials and methods used within residential, commercial, heavy civil, and industrial construction. The different roles of the various participants are examined along with industry history and traditions.

CNMG 7303 - Research Methods in Construction

Three credit hours.

This course familiarizes the student with the research proposal development process and the statistical, computational, visualization, and presentation tools available to the researcher. The course will parallel the organization of a research proposal.

CNMG 7310 - Building Codes I

Three hours lecture. Three credit hours.

This course introduces students to the concepts and structure of the International Building Code (IBC) in order to provide a basis for the correct utilization of the code. Students will learn specifics about the IBC, as well as how the code provides safeguards for people with regard to building safety and fire prevention, how to search the code, and how to properly refer to it during design and construction.

CNMG 7311 - Advanced Estimating

Three hours lecture. Three credit hours.

Advanced estimating procedures and development, utilizing computerized quantification, and database costing and estimating. Preconstruction estimating, proposal development, and Unformat Outline Specification development shall be incorporated into project preliminary documents.

Prerequisites: CNMG 4311/CNMG 5311 or consent of the instructor.

CNMG 7313 - Estimating Practicum

Three hours lecture. Three credit hours.

A study of commercial estimating practices. Students will develop project specific proposals for various projects. Proposals shall include cost estimate, schedule, inclusions, exclusions, and clarifications, outline specifications, cash flow analysis, in addition to preliminary plans. Students shall participate in 3 mock bid day proceedings.

Prerequisites: CNMG 7311.

CNMG 7318 - BIM and 4D Simulation

Three hours lecture. Three credit hours.

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.

Prerequisites: CNMG 4218 or equivalent.

CNMG 7325 - Estimating Management

Three hours lecture. Three credit hours.

Project scope identification, management, and control. Scope breakdown and subcontract management in the identification of quality control issues related to the estimate and scope procurement process.

Prerequisites: Instructor approval required.

CNMG 7334 - Bidding Law

Three hours lecture. Three credit hours.

An in-depth study of the legal environment of bidding law in the domestic commercial construction market. Topics include basic principles, bid guarantees, mistakes in bids, protesting bids, rights and remedies, and bid rigging.

Prerequisites: graduate standing.

CNMG 7345 - Applied Construction Management

Three hours lecture. Three credit hours.

This course discusses design, development, estimating, scheduling, contracting, and administering small construction projects, including extensive site and feasibility analyses.

Prerequisites: CNMG 4211 and CNMG 5329 or equivalent, or consent of the instructor.

CNMG 7376 - International Construction Business Management

Three hours lecture. Three credit hours.

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.

CNMG 7385 - Construction Management Graduate Project

Three credit hours.

Students, under faculty supervision, will work on practical problems related to construction management, and will submit a project report documenting the results.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the advisor.

CNMG 7399 - Special Topics

Three hours lecture. Three credit hours.

Selected advanced topics in construction.

Prerequisites: Consent of instructor.

CNMG 8100 - Construction Management Master's Thesis

One credit hour.

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.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor.

CNMG 8200 - Construction Management Master's Thesis

Two credit hours.

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.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor.

CNMG 8300 - Construction Management Master's Thesis

Three credit hours.

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.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor.

CNMG 8400 - Construction Management Master's Thesis

Four credit hours.

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.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor.

CNMG 8500 - Construction Management Master's Thesis

Five credit hours.

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.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor.

CNMG 8600 - Construction Management Master's Thesis

Six credit hours.

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.

Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor.

Counseling

CNSL 7109 - Independent Study

One credit hour.

Offered on demand.

CNSL 7206 - Orientation to Industry and Occupations

Two credit hours.

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 7209 - Independent Study

Two credit hours.

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.

Prerequisites: graduate standing, consent of advisor.

CNSL 7209 - Independent Study

Two credit hours.

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.

Prerequisites: graduate standing, consent of advisor.

CNSL 7211 - Guidance and Counseling Fundamentals for Educators

Two credit hours.

(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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Techniques, procedures for counseling interviews; emphasis on mastery of levels of skills within a micro-skills hierarchy for counseling interviews, appropriate use of skills in various stages of counseling.

Prerequisites: CNSL 7301 or consent of instructor.

CNSL 7303 - Career Development, Planning, and Information Services

Three credit hours.

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

Three credit hours.

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

Three credit hours.

This course is a survey of various approaches to counseling and psychotherapy as they pertain to group therapy. Theories, processes and procedures, ethical and professional issues in group counseling are explored. Students learn how to design, develop, and lead various types of groups, and establish personal approaches for applying group counseling theories and concepts. Processes, theories of group counseling; developing personal approach for applying concepts, processes.

Prerequisites: Prerequisite: CNSL 7301, Pre/Co-requisite CNSL 7302.

CNSL 7308 - Cross Cultural Counseling

Three credit hours.

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.

Prerequisites: CNSL 7300, CNSL 7301, and CNSL 7302, or consent of instructor.

CNSL 7309 - Independent Study

Three credit hours.

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.

Prerequisites: graduate standing, consent of advisor.

CNSL 7310 - Human Sexuality

Biological, psychosocial, behavioral, clinical, cultural factors; literature of; skills of communicating knowledge via counseling strategies for human sexual behaviors.

Prerequisites: EDFN 7330, CNSL 7300, CNSL 7301, and CNSL 7302 or consent of instructor.

CNSL 7312 - Advanced Cross-Cultural Counseling

Three credit hours.

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.

Prerequisites: CNSL 7308.

CNSL 7313 - Ethical and Legal Issues in the Counseling

Three credit hours.

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

Three credit hours.

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.

Prerequisites: 20 – 24 semester hours completed in the CNSL program and consent of the instructor.

CNSL 7321 - Practicum: Counseling Services-Secondary Education

Three credit hours.

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.

Prerequisites: 20 – 24 semester hours completed in the CNSL program and consent of the instructor.

CNSL 7330 - Practicum: School Counseling

Three credit hours.

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.

Prerequisites: 20 – 24 semester hours completed in the CNSL program and consent of the instructor.

CNSL 7331 - Practicum: Counseling-Secondary Education

Three credit hours.

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.

Prerequisites: 20 – 24 semester hours completed in the CNSL program and consent of the instructor.

CNSL 7340 - Internship: School Counseling

Three credit hours.

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.

Prerequisites: consent of the instructor.

CNSL 7341 - Internship: Counseling Services-Secondary Education

Three credit hours.

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.

Prerequisites: consent of the instructor.

CNSL 7399 - Thesis

Three credit hours.

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.

Prerequisites: 36 hours of graduate credit in counseling and educational foundations including Educational Foundations 7171 and CNSL 7303, and consent of the program advisor.

CNSL 7640 - Internship: School Counseling

Six credit hours.

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.

Prerequisites: consent of the instructor.

CNSL 7641 - Internship: Counseling Services-Secondary Education

Six credit hours.

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.

Prerequisites: consent of the instructor.

COUN 7190 - Independent Study

One credit hours.

Students under faculty supervision, can explore advanced topics in rehabilitation counseling not normally covered in regular course offerings.

Prerequisites: graduate standing, consent of instructor.

COUN 7290 - Independent Study

Two credit hours.

Students under faculty supervision, can explore advanced topics in rehabilitation counseling not normally covered in regular course offerings.

Prerequisites: graduate standing, consent of instructor.

COUN 7304 - Foundations of Mental Health Counseling

Three credit hours.

An introduction to and overview of the clinical mental health counseling profession. Students will explore professional identity, roles, functions, collaborative engagement with other human services

professionals, and licensure. The need for education, advocacy, prevention, intervention, and consultation will be

emphasized.

Prerequisites: Admission to program.

COUN 7305 - Ethics and Advocacy for Counselors

Three credit hours.

Comprehensive review of Codes of Ethics employed in the field of counseling. Emphasis is on the American Counseling Association (ACA) and Commission on Rehabilitation Counselor Certification (CRCC) Codes of Ethics along with other Codes associated with counseling specialization areas. Topics include the scope and specific standards for each code, resolution of ethical dilemmas, scope of practice, technology-assisted services, legal considerations, and approaches to advocacy for individuals and disability populations.

Prerequisites: Program Admissions

COUN 7360 - Rehabilitation Foundations

Three credit hours.

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

Three credit hours.

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.

Prerequisites: COUN 7360 or the consent of the instructor.

COUN 7362 - Psychological Aspects of Disability

Three credit hours.

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.

Prerequisites: COUN 7360 or the consent of the instructor.

COUN 7363 - Career Counseling and Placement

Three credit hours.

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.

Prerequisites: COUN 7360 or the consent of the instructor.

COUN 7364 - Case Management

Three credit hours.

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.

Prerequisites: COUN 7360, COUN 7361, COUN 7362, COUN 7367 or the consent of the instructor.

COUN 7365 - Counseling Practicum

Three credit hours.

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.

Prerequisites: Prerequisites: All Phase I courses (COUN 7360, EDFN 7303, COUN 7362, COUN 7361, and CNSL 7301) and Phase 2 courses (EDFN 7330, CNSL 7302, CNSL 7307, CNSL 7308, COUN 7363, COUN 7367, COUN 7368, COUN 7369, and COUN 7370); consent of Advisor or Fieldwork Coordinator.

COUN 7367 - Clinical Assessment

Three credit hours.

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.

Prerequisites: COUN 7360 and EDFN 7303 or the consent of the instructor.

COUN 7368 - Foundations of Substance Abuse

Three credit hours.

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

Three credit hours.

This course is a survey of various approaches to counseling and psychotherapy as they pertain to group therapy. Theories, processes and procedures, ethical and professional issues in group counseling are explored. Students learn how to design, develop, and lead various types of groups, and establish personal approaches for applying group counseling theories and concepts.

Prerequisites: All Phases 1 courses: COUN 7360, EDFN 7303, COUN 7362, COUN 7361, CNSL 7301; pre/co-requisite: CNSL 7302; or consent of instructor.

COUN 7370 - Psychopharmacology for Counselors

Three credit hours.

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 no prescribing professionals.

COUN 7380 - Human Development for Counseling

Three credit hours.

Prerequisite: Program admission. A life-span exploration of human development theories and concepts with emphasis on applications for counseling professionals.

COUN 7390 - Independent Study

Three credit hours.

Students under faculty supervision, can explore advanced topics in rehabilitation counseling not normally covered in regular course offerings.

Prerequisites: graduate standing, consent of instructor.

COUN 7660 - Internship in Counseling

Six credit hours.

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.

Prerequisites: The completion of all course work in the core and professional experience areas and the approval of the department faculty.

Computer Science

CPSC 5199 - Special Topics

One credit hour.

Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

Prerequisites: graduate standing, consent of instructor.

CPSC 5299 - Special Topics

Two credit hours.

Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

Prerequisites: graduate standing, consent of instructor.

CPSC 5360 - Computer Security

Three hours lecture. Three credit hours.

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. Not Open to students with credit for CPSC 4360.

CPSC 5366 - Interactive Computer Graphics and Animation

Three hours lecture. Three credit hours.

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. Not Open to students with CPSC 4366.

Prerequisites: Graduate Standing.

CPSC 5370 - Theory of Computation

Three hours lecture. Three credit hours.

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. Students with credit for 4370 may not take 5370.

Prerequisites: CPSC 3383, MATH 2310.

CPSC 5372 - Object-oriented Programming

Three hours lecture. Three credit hours.

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. Not Open to students with credit for CPSC 4373.

Prerequisites: working knowledge of a procedural programming language and UNIX operating system, or consent of the instructor.

CPSC 5373 - Fundamentals of Software Engineering

Three hours lecture. Three credit hours.

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. Not open to students with credit for CPSC 4373.

Prerequisites: Graduate Standing.

CPSC 5373 - Fundamentals of Software Engineering

Three credit hours.

Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

Prerequisites: graduate standing, consent of instructor.

CPSC 5375 - Fundamentals of Database Management

Three hours lecture. Three credit hours.

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. Students with credit for 4375 cannot take CPSC 5375 for additional credit.

Prerequisites: CPSC 3375 or equivalent.

CPSC 5376 - Applied Cryptography

Three hours lecture. Three credit hours.

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.

Prerequisites: CPSC 2380, MATH 2310, and STAT 3352 or equivalents.

CPSC 5381 - Computer Architecture and Design

Three credit hours.

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.

Prerequisites: Graduate Standing.

CPSC 5382 - Compiler Construction and Theory

Three hours lecture. Three credit hours.

Fundamental principles of compiler design such as finite state machine and context-free grammar. Compilation techniques include compile and run-time symbol tables, lexical analysis, syntax analysis, semantic analysis, object code generation, error diagnostic, and optimization. Dual listed in the Undergraduate Catalog as CPSC 5382.

Prerequisites: CPSC 3383.

CPSC 5383 - Artificial Intelligence

Three credit hours.

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. Students with credit for 4383 cannot take 5383 for credit.

Prerequisites: CPSC 2380; MATH 1452 and MATH 2310, junior/senior undergraduate or entry graduate level standings.

CPSC 5387 - Distributed Computing

Three hours lecture. Three credit hours.

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. Students with credit for 4387 cannot take 5387 for credit.

Prerequisites: CPSC 3383. Network-based client/server computing.

CPSC 5388 - Smart Software Systems

Three credit hours.

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. Not Open to students with credit for CPSC 4388.

Prerequisites: Graduate Standing.

CPSC 5399 - Special Topics

Three credit hours.

Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

Prerequisites: graduate standing, consent of instructor.

CPSC 5499 - Special Topics

Four credit hours.

Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

Prerequisites: graduate standing, consent of instructor.

CPSC 7100 - Independent Study

One credit hour.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

Prerequisites: Graduate Standing, instructor permission.

CPSC 7101 - Research Methodology

One credit hour.

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.

Prerequisites: Graduate Standing.

CPSC 7102 - Research Tools

One credit hour.

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.

Prerequisites: Graduate Standing.

CPSC 7103 - Research Application

One credit hour.

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 7101/ IFSC 7101/CPSC 7101 or CPSC 7102.

Prerequisites: SYEN 7101/ IFSC 7101/CPSC 7101 and CPSC 7102.

CPSC 7145 - Integrated Computer Lab Rotation

One credit hour.

First-semester orientation course to allow 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 as Computer Science, Systems Engineering, and Information Science.

CPSC 7190 - Graduate Seminar

One credit hour.

A weekly expository lecture series by the faculty and invited speakers on current research areas.

Prerequisites: Graduate Standing.

CPSC 7200 - Independent Study

Two credit hours.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

Prerequisites: Graduate Standing, instructor permission.

CPSC 7300 - Independent Study

Three credit hours.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

Prerequisites: Graduate Standing, instructor permission.

CPSC 7301 - Essentials of Computer Software

Three hours lecture. Three credit hours.

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.

Prerequisites: Graduate Standing with an engineering or science degree and at least one programming language of C, C++ or Java.

CPSC 7302 - Essentials of Computer Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: Graduate Standing with an engineering or science degree and at least one programming language of C, C++ or Java.

CPSC 7311 - Software Engineering

Three credit hours.

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.

Prerequisites: Graduate Standing and a working knowledge of C or C++.

CPSC 7312 - Parallel Processing

Three credit hours.

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.

Prerequisites: Graduate Standing; CPSC 2380 and CPSC 3482.

CPSC 7313 - Concurrent Software System Architecture

Three hours lecture. Three credit hours.

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 antipatterns.

Prerequisites: CPSC 5373 or permission of the instructor based on an existing background in object orientation methodology.

CPSC 7314 - Integrated Software System Engineering

Three hours lecture. Three credit hours.

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.

Prerequisites: CPSC 4373/5373.

CPSC 7321 - Operating Systems

Three credit hours.

Advanced topics in operating systems; process synchronization, deadlock, concurrency; fault tolerance, protection and security; distributed operating systems, multiprocessor operating systems.

Prerequisites: CPSC 3380 and 3482; working knowledge of C, C++, or Java Programming Language, and UNIX.

CPSC 7322 - Distributed Systems

Three credit hours.

Foundations of distributed operating systems; design and implementation of distributed systems; communication methods for open systems; kernel facilities; file management, naming and dock synchronization; transactional services for shared data.

Prerequisites: CPSC 3380 and 3482; working knowledge of C, C++, or Java Programming Language, and UNIX.

CPSC 7325 - Software Security Assessment

Three credit hours.

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.

Prerequisites: CPSC 5360 or Consent of Instructor.

CPSC 7326 - Malware Analysis

Three credit hours.

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.

Prerequisites: CPSC 4360/CPSC 5360 or Consent of Instructor.

CPSC 7331 - Computer Architecture

Three credit hours.

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.

Prerequisites: CPSC 3482.

CPSC 7332 - Advanced Computer Architecture

Three credit hours.

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.

Prerequisites: CPSC 7331.

CPSC 7333 - VLSI Design

Three credit hours.

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.

Prerequisites: CPSC 3482.

CPSC 7334 - Digital Systems and Hardware Design Languages

Three credit hours.

Architecture of a representative 32-bit processor, system building blocks, design conventions; HDL languages; modeling, simulation and verification of the representative processor.

Prerequisites: Computer Science 3482 and working knowledge of C.

CPSC 7341 - Telecommunications and Networking

Three credit hours.

Fundamentals of data communications; topologies and transmission media; protocol architecture; LAN, MAN, and WAN systems; network design issues.

Prerequisites: Graduate Standing.

CPSC 7342 - Advanced Computer Networking

Three credit hours.

Advanced concepts of computer networks; network hardware and software; preference models; data communications services; network standardization; design issues and their applications.

Prerequisites: CPSC 7341.

CPSC 7343 - Sensor Networks

Three credit hours.

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.

Prerequisites: CPSC 4384/CPSC 5384.

CPSC 7344 - Cloud Computing

Three credit hours.

The course aims to develop fundamental understanding of cloud computing systems. It covers the basic concept and framework of cloud computing, virtualization techniques, programming models such as MapReduce, could networking, security and privacy in cloud computing, cloud economics and practical implementation of cloud.

Prerequisites: consent of instructor and approval by the graduate coordinator of the computer science department.

CPSC 7351 - Database Design

Three credit hours.

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.

Prerequisites: CPSC 2380 and 3375, Mathematics 2310.

CPSC 7352 - Advanced Database Issues

Three credit hours.

Advanced issues in distributed databases, transaction systems, database machines, database mining, expert database systems, object-oriented databases, and extended data models.

Prerequisites: CPSC 7351.

CPSC 7361 - Computer Graphics

Three credit hours.

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.

Prerequisites: MATH 1305; working knowledge of C programming.

CPSC 7362 - Advanced Computer Graphics

Three credit hours.

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.

Prerequisites: CPSC 7361.

CPSC 7373 - Artificial Intelligence

Three credit hours.

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.

Prerequisites: CPSC 2380; MATH 1305 or MATH 1312.

CPSC 7374 - Image Processing

Three credit hours.

Study of digital image fundamentals; transformation enhancement, restoration, segmentation, compression, encoding, representation, and description of digital images.

Prerequisites: MATH 1305 or MATH 1312 and a working knowledge of C programming.

CPSC 7382 - Systems Analysis and Design

Three credit hours.

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 7385 - Analysis of Algorithms

Three credit hours.

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.

Prerequisites: CPSC 2380 and MATH 2310.

CPSC 7398 - Graduate Project

Three credit hours.

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.

Prerequisites: Graduate Standing and consent of the student's graduate advisor.

CPSC 7399 - Selected Topics

Three credit hours.

Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. Offered on demand.

Prerequisites: Graduate Standing, consent of instructor.

CPSC 7400 - Independent Study

Four credit hours.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

Prerequisites: Graduate Standing, instructor permission.

CPSC 7500 - Independent Study

Five credit hours.

Provides an opportunity for graduate students at the Master's level to learn material re levant 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 results will be submitted at the end of the semester.

CPSC 7600 - Independent Study

Six credit hours.

Provides an opportunity for graduate students at the Master's level to learn material re levant 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 results will be submitted at the end of the semester.

CPSC 7700 - Independent Study

Seven credit hours.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

CPSC 7800 - Independent Study

Eight credit hours.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

CPSC 7900 - Independent Study

Nine credit hours.

Provides an opportunity for graduate students at the Master's level 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 results will be submitted at the end of the semester.

CPSC 8100 - Thesis

One credit hour.

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.

Prerequisites: Consent of thesis advisor.

CPSC 8200 - Thesis

Two credit hours.

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.

Prerequisites: Consent of thesis advisor.

CPSC 8300 - Thesis

Three credit hours.

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.

Prerequisites: Consent of thesis advisor.

CPSC 8400 - Thesis

Four credit hours.

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.

Prerequisites: Consent of thesis advisor.

CPSC 8500 - Thesis

Five credit hours.

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.

Prerequisites: Consent of thesis advisor.

CPSC 8600 - Thesis

Six credit hours.

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.

Prerequisites: Consent of thesis advisor.

CPSC 9100 - Dissertation

One credit hour.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9200 - Dissertation

Two credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9300 - Dissertation

Three credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9400 - Dissertation

Four credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9500 - Dissertation

Five credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9600 - Dissertation

Six credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9700 - Dissertation

Seven credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9800 - Dissertation

Eight credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

CPSC 9900 - Dissertation

Nine credit hours.

This course deals with both the theoretical and practical aspects of designing dissertation research and successfully defending the design in a proposal hearing. The purpose of the course is to assist students through the proposal and dissertation writing processes.

Prerequisites: doctoral candidate status or consent of the program coordinator.

Criminal Justice

CRJU 5300 - Crime and Behavior

Three credit hours.

Contemporary criminological theories of factors contributing to crime and social disorder.

CRJU 5301 - Judicial Process and Behavior

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Law enforcement, judicial, correctional systems of other nations; emphasis on comparison with U.S.

CRJU 7300 - Criminological Theory

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Major concepts of criminal law; includes various states' approaches to definitions of crimes, criminal responsibility, criminal defenses.

CRJU 7320 - Applied Research and Analysis

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Specific aspects of American police agencies' organizational patterns, administrative problems, community issues, internal role systems.

CRJU 7323 - Ethics in Criminal Justice

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Traditional correctional functions; emphasis on development of community diversion and residential programs, involvement of correctional programs in the community.

CRJU 7340 - Correctional Administration

Three credit hours.

Problems with control and treatment of offenders in institutional correctional settings.

CRJU 7341 - Teaching Practicum

Three credit hours.

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

Three credit hours.

See PSYC 7360.

CRJU 7361 - Social Psychology

Three credit hours.

See PSYC 7361.

CRJU 7370 - Juvenile Delinquency Problems

Three credit hours.

Topics related to juvenile delinquency and prevention in the juvenile justice system.

CRJU 7390 - Independent Study

Three credit hours.

Intensive research under faculty supervision or practical experience in a selected criminal justice agency. Requires completion of a research paper.

Prerequisites: graduate standing, consent of program coordinator.

CRJU 7391 - Social Statistics

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Crucial criminal justice topic determined by student interest, available faculty resources; emphasis on exhaustive analysis of literature in the subject area.

CRJU 8193 - Dissertation

One credit hour.

Requires consent of advisor. Students will work with advisory committee to complete dissertation.

CRJU 8301 - Portfolio Preparation

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Independent investigation demonstrating knowledge and methods of scholarship and culminating in a written thesis with oral defense.

CRJU 8309 - Advanced Research Design

Three credit hours.

This course provides an in-depth overview of quantitative social research methods. Some of the topics discussed will include specific methodological issues experienced by researchers in criminology and criminal justice. Students will be trained on a variety of research techniques commonly employed by criminologists and other social researchers including experimental and quasi-experimental design, survey research, and other quantitative methods. Students will become accustomed to considering research questions and hypotheses and selecting appropriate research method(s) to test these questions/hypotheses. This course will prepare students to connect research questions and interests with appropriate research designs.

CRJU 8310 - Doctoral Proseminar

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

This course provides instruction in advanced multivariate statistical application. CRJU 7391 should be completed prior to taking this class.

CRJU 8316 - Advanced Statistics

Three credit hours.

This course will reinforce techniques for statistical analysis learned in CRJU 8315 - Multivariate Statistics and introduce students to more advanced approaches to quantitative analysis, including Generalized Linear Models (GLMs) and their extensions. By the end of the course, students will have a basic knowledge of quantitative analytic techniques used in advanced forms of criminal justice research.

CRJU 8331 - Urban Spatial Structures

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Advanced analysis of data related to crime in the urban environment. Topics include using Spatial Analyst, Crime Stat 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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Requires consent of advisor. Students work with advisory committee to complete dissertation.

Clinton School of Public Service

CPSP 7240 - Practicum I

Two credit hours.

CPSP 7320 - Capstone

Three credit hours.

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.

Prerequisites: Completion of CPSP 7331 with a grade of at least a C.

CPSP 7330 - International Public Service Project

Three credit hours.

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.

Prerequisites: Grade of at least a C in all completed core courses.

CPSP 7340 - Practicum II

Three credit hours.

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.

Prerequisites: Completion of CPSP 7240 with a grade of at least a C.

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 7125 - Public Finance for public Service

One credit hour.

The course is a conceptual introduction to the role of public finance in facilitating social change within a community. Basic principles and concepts of the municipal bond market, the public finance process, general public finance law, federal securities, and federal tax will be introduced.

CSPS 7126 - Grant Writing for Public Service

One credit hour.

This course explores grant proposal writing as an important tool of resource development, and an increasingly significant strategy to generate funding for community, agency, and government projects. Students will be introduced to strategies that are used to compete for needed resources. This course is designed to complement public service course and fieldwork at the Clinton School.

CSPS 7127 - Media Relations for Public Service

One credit hour.

This course is an introduction to media relations for public service practitioners. Basic principles and concepts of cross-platform news coverage and public relations will be examined as they relate to public service entities. Topics covered will include writing, editing, and electronic message creation for broadcast. print, and public relations distribution, including the Web and video. Interviewing skills for public service agencies that interface with mass media will also be explored and refined.

CSPS 7128 - Marketing for Public Service

Non-profit organizations are playing an increasingly important role in providing services and direction to address the issues of our day. Their funds often come from government sources and private foundations, but often these organizations are dependent on funds from marketing-driven private donations. An introductory overview of marketing non-profit organizations will be presented, and students will explore specific areas of interest. Topics discussed include direct mail, marketing on-line, branding, relationships with corporations for cause marketing and licensing, special campaigns, public relations and social marketing.

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 7220 - Capstone

Two credit hours.

The Clinton School's capstone program is designed to provide students an opportunity to integrate the knowledge and skills that have been gained from their core and elective courses; and the experiences of the Practicum and Internship, into a new and more in-depth focus on those professional and leadership skills that will be needed in their field of future practice and/or specialization. Specifically, the project should tap the knowledge, analytic abilities, writing and presentation skills, and the insights students have acquired through study, observation, and involvement in public service.

The Capstone course will be carried out by completing a public service project that builds on the student's cumulative knowledge as gained from these earlier experiences. The course is intended only for students who are completing their Master of Public Service degree program and is an alternative to comprehensive examinations or a research thesis.

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 Exchange

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 7303 - Communication Processes

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 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.

CSPS 7314 - Advocacy in Public Service

Three credit hours.

This course examines the role of public discourse in constituting (molding, shaping, and even distorting) publics, public decisions, and ultimately public life. Specifically, we will consider persuasion (human communication designed to influence the autonomous judgments and actions of others) and advocacy (the use of propositions, evidence, reasons, and general rhetorical strategies to promote and advance one's public or civic interests) and their influence on democratic processes and public policy. In this sense, we will take a broad view of what constitutes advocacy.

CSPS 7315 - Data Analysis

Three credit hours.

This course provides an overview of statistical methods and hands-on application of statistical tools to managerial decision-making in public service. Understanding statistical analysis and being able to work with data are important competencies of professionalism in public service. Course topics include research design, data collection and measurement, descriptive statistics, hypothesis testing, processes for selecting statistical tests and assessment of statistical assumptions, measures of association and other bivariate statistics, index variable construction, regression analysis, and an overview of other selected statistical and quantitative methods applied to social problems in public service.

CSPS 7321 - Organization Case Study

Three credit hours.

In this course, students will examine a public service organization of their choice using field research methods. The examination will focus on the implications of the organization's culture on the organization's effectiveness. In particular students will consider if the culture of the organization fosters diversity, supports organizational change, makes leadership more dynamic, supports ethical work, and helps employees achieve personal growth (Driskill & Brenton, 2011). The course will also require students to examine their own leadership and how they are influencing the organizational culture through their work.

CSPS 7323 - Leadership in Public Service

Three 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 7324 - Foundations of Public Service

Three 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 7325 - Legal and Ethical Issues in Public Service

Three credit hours.

Legal and ethical considerations shape every aspect of public service. This course will provide an overview of the primary ethical principles and legal concepts that pervade public service.

CSPS 7326 - Philanthropy Leadership and the Non-Profit Sector

Three credit hours.

Philanthropic institutions often aim giving toward major societal issues including environmental justice, quality education, race relations, immigration, health care and public health with the goal of keeping 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 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 wellbeing 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.

CSPS 7335 - Field Research Methods

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.

CSPS 7393 - Studies in American Grand Strategy

Three credit hours.

This is a seminar about American foreign policy. It is designed to give students a greater understanding of current debates over U.S. grand strategy and the role of the United States in the world today. Particular attention will be devoted to the War in Iraq and the Bush Doctrine of Preemption. Using their knowledge of history and past approaches to grand strategy, graduates of this seminar will be able to critique current U.S. foreign policy and provide thorough and well-supported recommendations for the future. This is an intensive hands-on course that assumes a certain level of knowledge of American foreign policy.

Divided into three sections, the course begins with an overview of the foundations of American foreign policy from the beginning of the republic through the end of the Cold War. Part II of the course focuses on the War on Terror, the War in Iraq, and the debate over the Bush Doctrine. In Part III of the course, students will examine other issues such as great power relation, views of the U.S. from abroad, energy security, and the crisis in Darfur. During the final three meetings of the class, students will be expected to break into teams to design a new foreign policy for the next administration, using short 3-5-page papers and formal PowerPoint presentations, known as "Clinton Briefs". This experience should allow students to synthesize what they have learned over the course of the semester and hone their writing and presenting skills.

CSPS 7420 - Capstone

The Clinton School's capstone program is designed to provide students an opportunity to integrate the knowledge and skills that have been gained from their core and elective courses; and the experiences of the Practicum and Internship, into a new and more in-depth focus on those professional and leadership skills that will be needed in their field of future practice and/or specialization. Specifically, the project should tap the knowledge, analytic abilities, writing and presentation skills, and the insights students have acquired through study, observation, and involvement in public service.

The Capstone course will be carried out by completing a public service project that builds on the student's cumulative knowledge as gained from these earlier experiences. The course is intended only for students who are completing their Master of Public Service degree program and is an alternative to comprehensive examinations or a research thesis.

CSPS 7520 - Capstone

The Clinton School's capstone program is designed to provide students an opportunity to integrate the knowledge and skills that have been gained from their core and elective courses; and the experiences of the Practicum and Internship, into a new and more in-depth focus on those professional and leadership skills that will be needed in their field of future practice and/or specialization. Specifically, the project should tap the knowledge, analytic abilities, writing and presentation skills, and the insights students have acquired through study, observation, and involvement in public service.

The Capstone course will be carried out by completing a public service project that builds on the student's cumulative knowledge as gained from these earlier experiences. The course is intended only for students who are completing their Master of Public Service degree program, and is an alternate to comprehensive examinations or a research thesis.

CSPS 7620 - Capstone

The Clinton School's capstone program is designed to provide students an opportunity to integrate the knowledge and skills that have been gained from their core and elective courses; and the experiences of the Practicum and Internship, into a new and more in-depth focus on those professional and leadership skills that will be needed in their field of future practice and/or specialization. Specifically, the project should tap the knowledge, analytic abilities, writing and presentation skills, and the insights students have acquired through study, observation, and involvement in public service.

The Capstone course will be carried out by completing a public service project that builds on the student's cumulative knowledge as gained from these earlier experiences. The course is intended only for students who are completing their Master of Public Service degree program, and is an alternate to comprehensive examinations or a research thesis.

Economics

ECON 5350 - Applied Econometrics

Three credit hours.

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.

Prerequisites: ECON 7320 or equivalent.

ECON 7100 - Foundations of Business

One credit hour.

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

Two credit hours.

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.

Prerequisites: Passing score on Excel assessment.

ECON 7300 - Economic Principles

Three credit hours.

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

Three credit hours.

MBA Core Course or MS in BISA 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.

Prerequisites: ECON 7100 or passing score on assessment.

ECON 7320 - Quantitative Analysis

Three credit hours.

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

Three credit hours.

MBA or MS in BISA Elective. Application of statistics, mathematics to economic problems; economic models' formulation, measurement, verification, prediction.

Prerequisites: ECON 7321 or consent of instructor.

ECON 7324 - Environmental and Resource Economics for Managers

Three credit hours.

MBA or MS in BISA Elective. 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.

Prerequisites: ECON 7300; permission of instructor to permit non- MBA graduate students to enroll.

ECON 7330 - Public Sector Economics

Three credit hours.

MBA or MS in BISA Elective. 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.

Prerequisites: ECON 7300 or consent of instructor.

ECON 7350 - Applied Econometrics

Three credit hours.

This course will introduce students to the skills used in empirical research, including, but not limited to, data collection, model specifications, 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 and independent research project involving the application of regression analysis.

Prerequisites: ECON 7320 or equivalent

ECON 7399 - Independent Study

Three credit hours.

MBA or MS in BISA Elective. Intensive research under faculty supervision on an approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

Prerequisites: All Foundation courses, 12 credits of Core requirements, and consent of instructor.

ECON 8300 - Seminar in Current Topics

Three credit hours.

MBA or MS in BISA Elective. Topics of current importance and interest in economics.

Prerequisites: Consent of instructor.

Educational Administration and Supervision

EDAS 7300 - Foundations of Educational Administration

Three credit hours.

This course will provide the student with an introduction to the organization and leadership theoretical knowledge base with practical application for school administrators.

Corequisites: EDAS 7305 or 7307.

EDAS 7301 - Instructional Leadership and Curriculum Assessment for School Improvement

Three credit hours.

An introduction to the concepts and skills required for principals to be instructional leaders who are involved in the planning, organization, administration, and evaluation of curricular programs that are aligned with instructional and assessment techniques.

Prerequisites: EDAS 7300, EDAS 7302, EDAS 7303, EDAS 7305, EDAS 7304.

EDAS 7302 - School Finance and Human Resource Allocation

Three credit hours.

A study of school finance concepts and the allocation of human resources within the education system.

EDAS 7303 - Education Law and Ethics

Three credit hours.

A study of legal concepts, issues relating to public school administration.

Prerequisites: EDAS 7300; EDAS 7304; EDAS 7305.

EDAS 7304 - Instructional Supervision and Evaluation of Academic Excellence

Three credit hours.

This course will provide candidates with the 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

Three credit hours.

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.

Corequisites: EDAS 7300.

EDAS 7309 - Building Coalitions in School and Community

Three credit hours.

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.

Prerequisites: EDAS 7300 - Foundations of Educational Administration and EDAS 7305 or 7307 Elementary or Secondary Principalship.

EDAS 7310 - Data-Based Decision Making

Three credit hours.

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 that is aligned with best practices for data-based decision making.

Prerequisites: EDAS 7300 and EDAS 7305.

EDAS 7312 - Introduction to Comparative Leadership in Rural and Urban Schools

Three credit hours.

This course is a comparative exploration of the development of schools and school leadership in rural and urban communities through an examination of similarities and differences among the political, social, and economic factors in U.S. society that shape the context for rural and urban school leaders. Leadership paradigms to address inequities in education in both settings, including social justice are also explored.

EDAS 7315 - Leadership for Social Justice in Rural and Urban Schools

Three credit hours.

This course is an in-depth examination of the role of the principal in rural and urban schools. Candidates will engage in advanced exploration of social justice and school leadership that leads to equitable outcomes in school engagement and achievement as measured by data-based assessment of specific goals designed to achieve social justice in rural and urban schools.

EDAS 7320 - Leadership Coaching

Three credit hours.

This course develops the necessary mindset and introductory skill set for leaders to address adaptive changes required for sustainable change that leads to excellence through the lens of the leader as coach. Through this lens, the leader acts as a thinking partner in order to uphold standards of excellence while holding others capable to rely on their expertise and/or seek knowledge needed to provide rigorous environments. Candidates will be introduced to the coaching mindset, essential coaching skills, and many opportunities for practice and application.

EDAS 7343 - Workshop

Three credit hours.

(For prospective, practicing, administrators, supervisors). Experiences; development of special skills.

Prerequisites: EDAS 7300.

EDAS 7380 - Administrative Internship

Three credit hours.

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.

Prerequisites: EDAS 7300, EDAS 7302, EDAS 7303, EDAS 7304, EDAS 7305.

EDAS 7391 - Independent Study in Educational Administration

Three credit hours.

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

Three credit hours.

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.

Prerequisites: EDAS 7300.

EDAS 8303 - Advanced Seminar in School Law and Ethics

Three credit hours.

The advanced study of legal and ethical concepts and issues related to executive management of educational institutions.

Prerequisites: EDAS 7300 and EDAS 7303.

EDAS 8305 - School Personnel Administration

Three credit hours.

Techniques, practices of administering school personnel programs.

EDAS 8307 - Socio-Cultural Foundations of Educational Policies

Three credit hours.

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

Three credit hours.

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.

Prerequisites: EDAS 7300.

EDAS 8310 - Directed Readings in Educational Administration

Three credit hours.

Current writings; evaluation of research base, assessment of authors' hypotheses; knowledge of current research, theory.

Prerequisites: consent of advisor.

EDAS 8311 - The Superintendence

Three credit hours.

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

Three credit hours.

This course will provide the student with acquisition of knowledge and application of practice of school personnel administration.

EDAS 8313 - Culturally Responsive School and Community Relations

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Theory, practice of policy making; political influences brought to bear on policy issues in education.

EDAS 8320 - Advanced Administrative Leadership Theory

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: 24 graduate hours in educational administration.

EDAS 8381 - Administrative Internship in the Central Office

Three credit hours.

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.

Prerequisites: 24 graduate hours in educational administration and completion of EDAS 8380 - Administrative Internship in the Central Office.

EDAS 9199 - Dissertation

One credit hour.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9299 - Dissertation

Two credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9300 - Doctoral Seminar and Scholarly Writing

Three credit hours.

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.

Prerequisites: program admission.

EDAS 9390 - Dissertation Colloquium

Three credit hours.

Development of various components of doctoral-level dissertation proposal.

EDAS 9399 - Dissertation

Three credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9499 - Dissertation

Four credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9599 - Dissertation

Five credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9699 - Dissertation

Six credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9799 - Dissertation

Seven credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9899 - Dissertation

Eight credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

EDAS 9999 - Dissertation

Nine credit hours.

Development of a doctoral-level dissertation.

Prerequisites: completion of all course work, consent of instructor.

Educational Foundations

EDFN 7142 - Seminar

One credit hour.

Topics related to educational foundations concepts. Offered on demand.

EDFN 7143 - Workshop

One credit hour.

Hands-on experiences related to education; topics vary. Offered on demand.

EDFN 7242 - Seminar

Two credit hours.

Topics related to educational foundations concepts. Offered on demand.

EDFN 7243 - Workshop

Two credit hours.

Hands-on experiences related to education; topics vary. Offered on demand.

EDFN 7302 - Introduction to Program Evaluation

Three credit hours.

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

Three credit hours.

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.

Prerequisites: graduate standing.

EDFN 7304 - Basic Statistics

Three credit hours.

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

Three credit hours.

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 7307 - History and Philosophy of Education

Three credit hours.

Historical, philosophical factors and trends; their effect on American education.

EDFN 7308 - Multicultural Education Trends and Issues

Three credit hours.

Multicultural education movement in the U.S., selected western industrial nations; includes historical development, goals, implementation.

EDFN 7313 - Learning Theories and Instructional Applications

Three credit hours.

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

Three credit hours.

Exploration of recent developments in cognition and the implications for instructional practices resulting from theory and research in cognitive psychology.

Prerequisites: EDFN 7313.

EDFN 7320 - Advanced Educational Psychology

Three credit hours.

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.

Prerequisites: EDFN 7313.

EDFN 7330 - Human Development

Three credit hours.

A lifespan perspective that addresses cognitive, physical, social and emotional development from birth through late adulthood. Special emphasis on developmental factors that affect schooling (P-12).

Prerequisites: graduate standing.

EDFN 7342 - Seminar

Three credit hours.

Topics related to educational foundations concepts. Offered on demand.

EDFN 7343 - Workshop

Three credit hours.

Hands-on experiences related to education; topics vary. Offered on demand.

EDFN 7370 - Educational Assessment

Three credit hours.

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

Three credit hours.

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.

Prerequisites: EDFN 7303.

EDFN 8301 - Instructional Research and Data Management

Three credit hours.

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.

Prerequisites: EDFN 7303.

EDFN 8305 - Intermediate Statistics

Three credit hours.

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.

Prerequisites: EDFN 7304.

EDFN 8306 - Advanced Educational Research

Three credit hours.

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.

Prerequisites: EDFN 7303, EDFN 7304.

EDFN 8308 - Advanced Statistics

Three credit hours.

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.

Prerequisites: EDFN 8305.

EDFN 8310 - Applied Measurement in Research and Analysis

Three credit hours.

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.

Prerequisites: EDFN 8305 and EDFN 8306.

EDFN 8315 - Internet Research in Education

Three credit hours.

This course will familiarize students with the scope and nature of education research-related resources using computer technology and the Internet. Environmental scanning and data mining will be addressed, and students will learn to think technologically about empirically-based knowledge production through completion of original research projects using online research resources.

EDFN 8383 - Advanced Qualitative Research Methods

Three credit hours.

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 postmodern 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.

Prerequisites: EDFN 7373.

English

ENGL 4368 - Literary Theory

Three credit hours.

Students will discuss, analyze, and research the major literary theories, with emphasis on recent issues.

ENGL 5116 - Seminar in Creative Writing

One credit hour.

Study and practice in creative writing. Class discussion/studio workshop/field placement. May be repeated when the topic varies. Offered in summer.

Prerequisites: ENGL 3398, 3399, or consent of instructor.

ENGL 5202 - Teaching Literature in Secondary Schools

Two credit hours.

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 5216 - Seminar in Creative Writing

Two credit hours.

Study and practice in creative writing. Class discussion/studio workshop/field placement. May be repeated when the topic varies. Offered in summer.

Prerequisites: ENGL 3398, 3399, or consent of instructor.

ENGL 5311 - Medieval Literature

Three credit hours.

Students will discuss, analyze, and research works in English literature from A.D. 450 to 1500 as well as works in translation from medieval German, Latin, and romance literature. Students with credit for ENGL 4311 may take ENGL 5311 with instructor approval.

ENGL 5313 - Arthurian Literature

Three credit hours.

A study of Arthurian chronicle and romance from Celtic beginnings through Malory, with examination of nineteenth- and twentieth-century developments of the legend.

ENGL 5314 - Topics in Medieval and Renaissance Literature

Three credit hours.

Students will discuss, analyze, and research selected topics in medieval and Renaissance literature. Students with credit for ENGL 4314 may enroll in ENGL 5314 with instructor's approval.

ENGL 5315 - World English

Three credit hours.

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. Dual listed in the Undergraduate Catalog as ENGL 5315.

Prerequisites: Recommended ENGL 3311 or ENGL 3313.

ENGL 5316 - Seminar in Creative Writing

Three credit hours.

Study and practice in creative writing. Class discussion/studio workshop/field placement. May be repeated when the topic varies. Offered in summer.

Prerequisites: ENGL 3398, 3399, or consent of instructor.

ENGL 5317 - Literary Linguistics

Three credit hours.

An application of recent theories and methodologies of linguistics and language arts to the reading, analysis, and appreciation of literature. Dual listed in the Undergraduate Catalog as ENGL 5317.

Prerequisites: Recommended ENGL 3311 or ENGL 3313.

ENGL 5321 - English Renaissance Drama

Three credit hours.

Students will discuss, analyze, and research the major playwrights of the English Renaissance, including Marlowe, Kyd, Jonson, Beaumont, Fletcher, and Webster but excluding Shakespeare. Students with credit for ENGL 4321 may enroll in ENGL 5321 with instructors' approval.

ENGL 5324 - Shakespeare

Three credit hours.

Selected works, including the major comedies and tragedies.

ENGL 5325 - Teaching Shakespeare Through Performance

Three credit hours.

Pedagogical focus on teaching plays, particularly Shakespeare's, in the elementary and secondary schools by using performance activities. Special emphasis on the four most often taught Shakespearean plays (Romeo and Juliet, Julius Caesar, Macbeth, Hamlet); one comedy and one history play included but titles may change each time the course is offered. Dual listed in the Undergraduate Catalog as ENGL 4325.

ENGL 5328 - Seventeenth-Century Literature

Three credit hours.

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.

ENGL 5331 - Restoration and Eighteenth-Century English Literature

Three credit hours.

English drama, poetry, fiction, and non-fiction 1660-1780. Students with credit for ENGL 4331 cannot repeat this course for credit.

ENGL 5341 - English Romanticism

Three credit hours.

English poetry, fiction, and non-fiction from the Romantic Century, 1750-1850. Students with credit for ENGL 4341 cannot repeat this course for credit.

ENGL 5343 - Victorian Literature

Three credit hours.

Representative writers, including Tennyson, Browning, Arnold, and Hopkins.

ENGL 5345 - 19th-century American Literature

Three credit hours.

Students will discuss, analyze, and research selected writers and texts in American Literature of the nineteenth century.

Prerequisites: a junior level course in American literature is recommended.

ENGL 5354 - Postcolonial Literature

Students with credit for ENGL 4354 may not repeat for credit. Three credit hours.

Seminar on postcolonial literature from Africa, Asia, and/or the Americas, exploring the development of postcolonial consciousness and writing by focusing on major themes characteristic of postcolonial writing.

Prerequisites: Completion of one junior-level English course.

ENGL 5355 - Readings in European Literature

Three credit hours.

Selected readings in European literature from at least 2 national traditions. Repeatable with consent of instructor. Students with credit for ENGL 4355 can repeat course for credit if topic has changed.

ENGL 5366 - Contemporary Literature

Students will discuss, analyze, and research the major trends in fiction, poetry, and drama since 1945, with emphasis on British, America, and European writers. Students with credit for ENGL 4366 may enroll in ENGL 5366 with instructor approval.

ENGL 5367 - Short Story Survey

Three credit hours.

Wide reading of American and foreign short fiction.

ENGL 5369 - The Theory and Craft of Poetry

Three credit hours.

Study and practice of forms, techniques, and theories of poetry, emphasizing the views of the poets.

Prerequisites: ENGL 3319 or consent of instructor.

ENGL 5370 - Seminar in Language or Literature

Three credit hours.

Selected topics in language or literature. May be repeated when the topic differs. Offered in fall.

Prerequisites: graduate standing, consent of instructor.

ENGL 5372 - Creative Writing Workshop

Students with credit for ENGL 4372 may repeat for credit. Three credit hours.

This course provides continued study and practice writing in a variety of contemporary genres. Focuses on students composing and editing in a workshop format. Special topics will be selected depending on the instructor.

Prerequisites: ENGL 2336 with a grade of C or higher; a junior-level English course is recommended.

ENGL 5375 - Young Adults Literature

Three credit hours.

In this course, students will read and discuss adolescent and young adult literature. Students with credit for ENGL 4375 may not take ENGL 5375 for credit.

ENGL 5379 - The Theory and Craft of Fiction

Three credit hours.

Survey of the forms, techniques, and theories of fiction, emphasizing the views of fiction writers.

Prerequisites: ENGL 3318 or instructor consent.

ENGL 5381 - American Fiction

Three credit hours.

Representative readings in the development of American literature.

ENGL 7100 - Independent Study

Three credit hours.

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 hours.

ENGL 7200 - Independent Study

Three credit hours.

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 three hours.

ENGL 7300 - Independent Study

Three credit hours.

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

ENGL 7312 - Linguistic Theory

Three credit hours.

Examination of English grammar in current objective, scientific terms; focus on how English sentences are structured.

Prerequisites: graduate standing (assumes knowledge of traditional grammar).

ENGL 7314 - Internship

Three credit hours.

Provides practical experience in a professional setting, such as the Sequoyah National Research Center or other archive. The internship provides students the opportunity to apply their academic background and to gain new skills and professional contacts.

Prerequisites: graduate standing, consent of instructor.

ENGL 7320 - Seminar in Linguistics

Three credit hours.

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.

Prerequisites: graduate standing, background in formal language analysis related to the seminar topic or consent of instructor.

ENGL 7360 - Seminar in Literature

Three credit hours.

Major author in either British or American literature; author may change each time course is offered.

Prerequisites: graduate standing; undergraduate English minor or equivalent or consent of instructor.

ENGL 7369 - Seminar in Analysis of Literary Form

Three credit hours.

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

Prerequisites: graduate standing; undergraduate English minor or equivalent or consent of instructor.

Environmental Health Sciences

ENHS 5199 - Special Topics in Environmental Health Sciences

One to Three hours lecture. One credit hour.

Topics include specialized areas of environmental health sciences. Credit varies depending on depth of content. Offered on demand.

Prerequisites: graduate standing or consent of instructor.

ENHS 5299 - Special Topics in Environmental Health Sciences

One to Three hours lecture. Two credit hours.

Topics include specialized areas of environmental health sciences. Credit varies depending on depth of content. Offered on demand.

Prerequisites: graduate standing or consent of instructor.

ENHS 5399 - Special Topics in Environmental Health Sciences

One to Three hours lecture. Three credit hours.

Topics include specialized areas of environmental health sciences. Credit varies depending on depth of content. Offered on demand.

Prerequisites: graduate standing or consent of instructor.

ENHS 5410 - Environmental Planning

Four credit hours.

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.

Prerequisites: ENHS 2320, or consent of instructor.

ENHS 5415 - Environmental Impact Analysis

Four credit hours.

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.

Prerequisites: ENHS 3310, ENHS 3340 or 3350, RHET 3316, BIOL 3303 and 3103, STAT 4350, or consent of the instructor.

ENHS 5430 - Environmental Epidemiology

Four credit hours.

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.

Prerequisites: ENHS 3340 or 3350, BIOL 2401, STAT 4350, or consent of the instructor.

Earth Science

ERSC 5100 - Independent Problems

One credit hour.

This course offers the student an independent laboratory or field study of a problem in the earth sciences in consultation with an instructor.

Prerequisites: consent of the instructor.

ERSC 5199 - Special Topics

One credit hour.

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.

Prerequisites: consent of the instructor.

ERSC 5200 - Independent Problems

Two credit hours.

This course offers the student an independent laboratory or field study of a problem in the earth sciences in consultation with an instructor.

Prerequisites: consent of the instructor.

ERSC 5299 - Special Topics

Two credit hours.

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.

Prerequisites: consent of the instructor.

ERSC 5300 - Independent Problems

Three credit hours.

This course offers the student an independent laboratory or field study of a problem in the earth sciences in consultation with an instructor.

Prerequisites: consent of the instructor.

ERSC 5322 - Environmental Geology

Three hours lecture. Three credit hours.

Humans as a geologic agent, geologic hazards in the environment, geology and land use studies, urban geology, and case histories. Dual listed in the Undergraduate Catalog as ERSC 4322.

Prerequisites: ERSC 1302/1102 and MATH 1302 or consent of instructor.

ERSC 5323 - Geology of Arkansas

Field trips and three hours lecture. Three credit hours.

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 in the Undergraduate Catalog as ERSC 4323.

Prerequisites: consent of instructor.

ERSC 5370 - Climate Studies

Three credit hours.

This course is designed to provide students with a fundamental understanding of the Earth's Climate System. Topics covered in the course include climate variability and change, climate records, policy, and how solar energy, atmospheric circulation, heat storage and transfer, ocean interactions, volcanism, albedo, and greenhouse gases can impact the climate. Dual listed in the Undergraduate Catalog as ERSC 4370.

Prerequisites: consent of instructor.

ERSC 5371 - Engineering Geology

Two hours lecture. Two hours laboratory per week. Three credit hours.

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.

Prerequisites: consent of instructor.

ERSC 5372 - Surface Water Hydrology

Three credit hours.

Hydrolic cycle, basin analysis, runoff analysis, stream hydraulics, flooding, case histories, field methods in hydrologic planning. Dual listed in the Undergraduate Catalog as ERSC 4372.

Prerequisites: consent of instructor.

ERSC 5373 - Hydrogeology

Three hours lecture.

Ground water occurrence, flow, porosity, permeability, aquifer analysis, geology of ground water, water well logging, well development, case histories, field methods, hydrogeologic planning. Offered in spring on even years.

Prerequisites: MATH 1302 or 1311; ERSC 3310; Co-requisite CHEM 1402

ERSC 5380 - Oceanography

Three hours lecture. Three credit hours.

This course provides an introduction to the historical, physical, chemical, geological, and biological aspects of the oceans and their importance to the global system. Dual listed in the Undergraduate Catalog as ERSC 4380.

Prerequisites: consent of instructor.

ERSC 5380 - Oceanography

Three credit hours.

Prerequisite: consent of instructor. This course provides an introduction to the historical, physical, chemical, geological, and biological aspects of the oceans and their importance to the global system. three hours lecture per week. Three credit hours. Dual listed as ERSC 4380. Dual listed in the Undergraduate Catalog as ERSC 4380

Prerequisites: Consent of Instructor

ERSC 5391 - Cooperative Education in Earth Science

Three credit hours.

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 in the Undergraduate Catalog as ERSC 4391.

Prerequisites: Consent and approval of assignment by advisor.

ERSC 5399 - Special Topics

Three credit hours.

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.

Prerequisites: consent of the instructor.

ERSC 5419 - Geomorphology

Three hours lecture. Field study or two hours laboratory per week. Four credit hours.

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 in the Undergraduate Catalog as ERSC 4419.

Prerequisites: consent of the instructor.

ERSC 5421 - Introduction to Geographic Information Systems

Three hours lecture. Two hours laboratory per week. Four credit hours.

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.

Prerequisites: consent of instructor.

ERSC 5422 - GIS II

Two hours lecture. Four hours laboratory per week. Four credit hours.

Prerequisites: GEOG/ERSC/BIOL 5421 or consent of instructor. This course builds on the fundamental concepts of Geographic Information Systems (GIS) from GEOG/ERSC 4421, GIS I. It focuses on advanced applications in GIS with an emphasis on problem-solving, advanced analysis techniques, and database management. Graduate Level Dual listed as GEOG 5422. Undergraduate Level Dual listed as GEOG 4422. 4 credit hours.

Prerequisites: BIOL/ERSC 4421/ERSC 5421 or consent of instructor.

ERSC 5426 - Introduction to Remote Sensing

Three hours lecture. Field study or two hours laboratory per week. Four credit hours.

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 in the Undergraduate Catalog as ERSC 4426.

Prerequisites: ERSC/BIOL 4421/BIOL 5421 or consent of instructor.

ERSC 5460 - Paleobiology

Three hours lecture. One 1-2-day field trip; two hours laboratory per week. Four credit hours.

The evolution and ecological structure of the biosphere from the origin of life to the present emphasizing the evolution and paleobiology of animal life as shown by the fossil record. Lectures discuss the methods used to interpret the fossil record, and cover topics such as ontogeny, speciation, phylogeny and systematics, functional anatomy, biogeography, biostratigraphy, paleoecology, and macroevolution. Laboratories will focus on paleo biological principles that can be demonstrated by the major groups of invertebrates that are common in the geologic record. Dual listed in the Undergraduate Catalog as ERSC 4460.

Prerequisites: consent of instructor.

ERSC 5473 - Hydrogeology

Three hours lecture. Two hours laboratory per week. Four credit hours.

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 in the Undergraduate Catalog as ERSC 4473.

Prerequisites: consent of instructor.

ERSC 5490 - Weather Studies

Four credit hours.

This course looks at broad scale concepts of weather and climatology to help understand the physical impact of weather on geopolitical applications and human behavior. This class is taught as an interactive online class both as a regular classroom and online in eLearning format. On-line NOAA and AMS resources will be used throughout the classes. The lab sessions will provide hands on amplification of the lectures and theory. Dual listed in the Undergraduate Catalog as ERSC 4490.

Prerequisites: consent of instructor.

ERSC 5499 - Special Topics

Four credit hours.

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.

Prerequisites: consent of the instructor.

ERSC 7399 - Selected Topics

Two hours lecture. Three hours laboratory per week. Three credit hours.

Topics include modern geology, meteorology, oceanography; assists professionals to remain current in these rapidly expanding fields; laboratory emphasis on creative problem solving, field trips. Offered in summer.

Prerequisites: four undergraduate geology hours, professional experience in some area of earth science, consent of instructor.

Finance

FINC 5320 - Bank Financial Management

Three credit hours.

MBA Elective. Analysis and management of the asset and liability portfolio of depository financial institutions. Not Open to students with credit for FINC 4320.

Prerequisites: FINC 7100.

FINC 5350 - Financial Behavior and Modeling

Three credit hours.

This course is composed of two components. The first component develops the financial modeling skills required by many finance jobs, with hands-on financial model building using Excel. Applications will include fixed income problems. The second component introduces students to behavioral finance theories and applications.

Prerequisites: FINC 7100, ECON 7100, and ECON 7200.

FINC 5355 - Predictive Data Analysis

Three credit hours.

Students will apply analytical techniques informed by economic theory and probability theory to solve real-life practical problems taken from a diverse set of applications such as anticipating behavioral outcomes and estimating worst-case scenarios.

Prerequisites: ECON 3355 or ECON 7200.

FINC 5373 - Real Estate Development & Mgmt.

Three credit hours.

The course analyzes an eight-stage model of real estate development using examples in the local community as well as national cases. Students will learn the roles of city planners, legislators, regulators, land planners, lawyers, lenders, property managers and other constituencies within the development process. The course requires site and interaction with development professionals. Dual listed in the Undergraduate Catalog as FINC 4373.

Prerequisites: FINC 3370 or FINC 3310 with C or better, or equivalent; FINC 7100 or equivalent.

FINC 5383 - Applied Equity Analysis

Three credit hours.

Prerequisite: FINC 3350 and FINC 4350 with grade of C or higher, and consent of chairperson and 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 this course; check with the department for application forms and deadlines. Dual-listed with FINC 4383. Three credit hours.

Prerequisites: FINC 3350 and FINC 4350 with grade of C or higher and consent of chairperson and instructor.

FINC 7100 - Finance Fundamentals

One credit hour.

This course provides students with the essential skills required to successfully complete the FINC 7311 course. The course will cover financial statement and cash flow analysis, time value of money and its applications to both financial and real assets, and risk and rates of return.

Prerequisites: ACCT 7100, passing score on Excel assessment.

FINC 7311 - Applied Corporate Finance

Three credit hours.

This course fully develops the analysis of financial statements and cash flow and then examines the investment and financing decisions of firms in a market economy from the perspective of value creation. The major financial 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.

Prerequisites: ACCT 7304, ECON 7313, FINC 7100 or passing assessment, ECON 7200.

FINC 7320 - Advanced Investment Analysis

Three credit hours.

MBA or MS in BISA elective. Evaluation of capital markets, analytical techniques useful for security analysis; emphasis on analysis of stocks, bonds in portfolio management.

Prerequisites: FINC 7100 or equivalent.

FINC 7323 - Bank Financial Management

Three credit hours.

MBA or M.S. in BISA Elective. Analysis and management of the asset and liability portfolio of depository financial institutions.

Prerequisites: FINC 7100 or equivalent.

FINC 7325 - Financing Entrepreneurial Ventures

Three credit hours.

MBA or M.S. in BISA Elective. 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.

Prerequisites: FINC 7100.

FINC 7330 - Insurance and Risk Management

Three credit hours.

MBA or M.S. in BISA Elective. 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.

Prerequisites: FINC 7100 or equivalent.

FINC 7335 - International Finance

Three credit hours.

MBA or M.S. in BISA Elective. Multinational corporate finance; practices and problems in international finance; balance of payments and foreign exchange problems; recent trends and developments in international finance. Not open to students with credit for FINC 4330

Prerequisites: FINC 7100 or equivalent.

FINC 7340 - Real Estate Markets

Three credit hours.

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.)

Prerequisites: MBA or M.S. in MIS Elective.

Finance

FINC 7350 - Financial Institutions and Organizations

Three credit hours.

MBA or M.S. in BISA Elective. Functions of financial intermediaries; assets, liabilities management analysis; historical highlights, future growth prospects; problems, solutions.

Prerequisites: FINC 7100 or equivalent.

FINC 7399 - Independent Study

Three credit hours.

MBA or M.S. in BISA Elective. Intensive research under faculty supervision on approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

Prerequisites: All Foundation courses, 12 credits of Core courses, and consent of instructor.

FINC 8300 - Seminar in Current Topics

Three credit hours.

MBA or M.S. in BISA Elective. Topics of current importance and interest in finance.

Prerequisites: Consent of instructor.

Teaching the Gifted and Talented

GATE 5102 - Workshop

One credit hour.

Subjects vary. Offered on demand.

GATE 5202 - Workshop

Two credit hours.

Subjects vary. Offered on demand.

GATE 5302 - Workshop

Three credit hours.

Subjects vary. Offered on demand.

GATE 7191 - Independent Study

One credit hour.

Directed individual study of selected topics. 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.

Prerequisites: consent of advisor. consent of instructor.

GATE 7193 - Special Topics

One credit hour.

Subjects vary. Offered on demand.

GATE 7291 - Independent Study

Two credit hours.

Directed individual study of selected topics. 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.

Prerequisites: consent of advisor. consent of instructor.

GATE 7293 - Special Topics

Two credit hours.

Subjects vary. Offered on demand.

GATE 7350 - Teaching the Gifted and Talented

Three credit hours.

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

Three credit hours.

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 7356 - Current Issues in Research on Education of the Gifted and Talented

Three credit hours.

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.

Prerequisites: GATE 7350.

GATE 7357 - Curriculum and Instruction in Gifted Education

Three credit hours.

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.

Prerequisites: GATE 7350.

GATE 7361 - Advanced Placement for Talented Youth

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Practical application of content, instructional skills, competencies acquired in courses **MAY** be repeated once for credit.

Prerequisites: GATE 7350, GATE 7357, consent of advisor.

GATE 7391 - Independent Study

Three credit hours.

Directed individual study of selected topics. 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.

Prerequisites: consent of advisor. consent of instructor.

GATE 7393 - Special Topics

Three credit hours.

Subjects vary. Offered on demand.

GATE 7395 - Internship

Experience in the chosen specialization area under guidance of a practicing professional. Offered on demand.

Prerequisites: 12 graduate hours, consent of advisor.

GATE 7399 - Thesis

Three credit hours.

Formal research project; content determined with faculty committee chosen by student. May be repeated for six hours total.

Prerequisites: Educational Foundations EDFN 7303, 15 additional graduate education hours, consent of advisor.

Geography

GEOG 5300 - Special Topics

Three credit hours.

Topics of contemporary interest and demand; focused to permit in-depth understanding of issue.

Prerequisites: nine geography hours (or nine hours in an associated discipline that complements the topic), consent of instructor.

GEOG 5321 - Geomorphology

Three credit hours.

See ERSC 5321.

Prerequisites: consent of the instructor.

GEOG 5325 - Map Design & Web Mapping

3 credit hours.

This course introduces the map as a complex and interdisciplinary infographic. Students are taught the art and science of map design, i.e. cartography. Sub-topics include principles of infographic design, map anatomy, layout, color theory, and typography. The role of maps as story-telling device are emphasized and both print and web-based map output are produced. Students gain hands on experience in the production of maps using GIS platforms (ArcGIS Desktop, QGIS), web mapping tools (Tableau, Google Sites, ESRI Story Maps, Google My Maps), and graphic design software (Adobe Illustrator). Course is fully online.

Prerequisites: Prerequisites: GEOG/ERSC 4421 or consent of instructor

GEOG 5332 - Population Geography

Three credit hours.

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.

GEOG 5421 - GIS I

Four credit hours.

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. Same as ERSC 5421. Dual-listed as GEOG 4421. Same as ERSC 4421. 4 credit hours. Dual listed in the Undergraduate Catalog as GEOG 4421 and GEOG 5421 same as ERSC 4421.

GEOG 5422 - GIS II

Four credit hours.

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. Same as ERSC 4422. Dual listed as GEOG 5422. Same as ERSC 5422. 4 credit hours. Dual listed in the Undergraduate Catalog as GEOG 4422 and GEOG 5422 same as ERSC 4422

Gerontology

GERO 5301 - Psychology of Adult Learning

Three credit hours.

This course explores research-based practice in adult learning and development, with emphasis on advances in neuroscience. Cross listed with ADED 4301/5301. Dual-listed in the UALR Undergraduate Catalog as GERO 4301.

GERO 5303 - Teaching Adults

Three credit hours.

Best practices in contemporary teaching and learning processes and methods for adults, emphasis on individual and group learning methods and procedures, selecting materials appropriate for adult learners. Cross listed with ADED 4303/5303. Dual-listed in the UALR Undergraduate Catalog as GERO 4303.

GERO 5310 - Social Gerontology

Three credit hours.

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

Three credit hours.

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 Undergraduate Catalog as GERO 4315.

GERO 5331 - Introduction to Animal Assisted Therapy

Three credit hours.

This elective will explore the role of companion animals for people of all ages and the importance of including consideration of the role of animals in the helping professions. The course will cover the human-animal bond, physical and emotional health benefits of companion animals, the role of animals in the development of children and families, the use and impact of Animal Assisted Activity/Therapy with a variety of populations, including older adults, and ways in which professionals can include animals in their disciplines as teachers, companions, and facilitators. The course will include observations of AAT visits to human service settings, both in the community and long-term care, as well as web-enhanced classes. Students with credit for SOWK/GERO 4331 cannot receive credit for SOWK 5331/GERO 5331. Cross listed as SOWK 5331.

GERO 5336 - Social Aspects of Death and Dying

Three credit hours.

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

Three credit hours.

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 5346 - Family in Late Life

Three credit hours.

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 Undergraduate Catalog as GERO 4346.

Prerequisites: GERO 2300.

GERO 5385 - Topics Seminar

Three credit hours.

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 Undergraduate Catalog as GERO 4385.

Prerequisites: consent of instructor.

GERO 7321 - Aging and Social Policy

Three credit hours.

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.

Prerequisites: graduate standing.

GERO 7322 - Assessment and Care Management of the Older Adult

Three credit hours.

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.

Prerequisites: graduate standing.

GERO 7323 - Impact of Illness and Disability

Three credit hours.

This course prepares professionals to work with those experiencing illness and disability across the life course, emphasizing strengths and resiliency. Ethical, as well as the bio-psycho-social-spiritual aspects of illness and disability in the individual, family and wider community are highlighted.

GERO 7325 - Health and Biology of Aging

Three credit hours.

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.

Prerequisites: graduate standing.

GERO 7327 - Grief, Loss, and Social Work Practice

Three credit hours.

Individuals, families, groups, and communities all experience loss. Losses may be developmental and expected, and some are traumatically unexpected. Losses come with life transitions, changing relationships, and, of course, death. Many clients with whom social workers will interact will need assistance understanding and adjusting to losses and grief reactions. Basic assessment and intervention skills for practice with client systems experiencing grief and loss will be emphasized.

Prerequisites: graduate standing.

GERO 7350 - Research Practicum

Three credit hours.

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.

Prerequisites: graduate standing, statistics and research methods courses or consent of instructor.

GERO 8310 - Field Work I

Prerequisites: 18 graduate hours, consent of advisor.

GERO 8320 - Field Work II

Three credit hours.

Prerequisites: 18 graduate hours, consent of advisor.

GERO 8630 - Thesis

Six credit hours.

Scholarly investigation; primary or secondary analysis of data pertinent to student's specialization track.

Prerequisites: 24 graduate hours; consent of advisory committee.

Health, Human Performance and Sport Management

HHPS 5340 - Adapted Physical Education K-12

Three hours lecture.

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.

HHPS 5350 - Methods and Techniques of Teaching Physical Education 6-12

Three hours lecture. Three credit hours.

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 Undergraduate Catalog as HSCI 4350.

Prerequisites: HHPS 3320, HHPS 3210, and HHPS 3310, or department approval.

HHPS 5371 - Health Education Concepts and Applications

Three hours lecture.

Concepts, philosophy, applications in public, private, professional, commercial organizations that exist to improve, maintain health. Offered in fall on even years.

HHPS 5373 - Controversial Issues in Health Education

Three hours lecture.

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.) Offered on demand.

HHPS 5378 - Organization and Administration of Health Education Programs

Three hours lecture. Three credit hours.

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. This course is not open to students with credit for HHPS 4378. Open to students with credit for HHPS 4378. Dual listed in the Undergraduate Catalog as HHPS 4378.

HHPS 5382 - Cultural Competence in Health

Three credit hours.

This course is designed to increase knowledge and understanding of the importance of cultural competence in health education and community health promotion. Focus will be on culturally appropriate communication, health literacy, health disparities, and the effective strategies in planning, implementing, and evaluating culturally appropriate health education programs. Self-assessments and participation in cultural engagement activities will be encouraged to help increase cultural competency. Graduate students, in addition, will be required to develop an innovative cultural competency model or activity. Responsibilities of a certified health education specialist will be addressed. Dual listed in undergraduate catalog with HHPS 4382.

HHPS 5399 - HHPS Special Topics

Three hours lecture.

Selected topics in specialized areas of health education, human performance, and sport management. Course topics will be announced in advance.

Prerequisites: HHPS 2330.

HHPS 5430 - Epidemiology: Environmental & Health

Four credit hours.

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 7198 - Project

One credit hour.

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 7301 - Research Methods in Health Sciences

Three credit hours.

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 Health Sciences

Three credit hours.

A study of fundamental statistical concepts and techniques including descriptive and inferential parametric/non-parametric tests.

HHPS 7303 - Evaluation of Health Programs

Three credit hours.

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 - Intro to Community and Public Health

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

This course focuses on the content and process of PK-12 Physical Education curriculum development for the public schools.

HHPS 7321 - Advanced Motor Learning

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: Consent of the instructor.

HHPS 7326 - Lab Techniques in Exercise Science

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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 - Psycho-Social Aspects of Sport

three credit hours.

This course examines various psychological and social contexts that influence, or arc influenced by sports. By examining multi-disciplinary perspectives of sport, students will gain a greater understanding of the perceived sport experience, the role of sport in society, and aspects of interpersonal behavior in sport contexts.

HHPS 7398 - Project

Three credit hours.

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 7698 - Project

Six credit hours.

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. All students must pass comprehensive examinations before enrolling in this course.

Prerequisites for Health Education: HHPS 7301, HHPS 7302, HHPS 7303, HHPS 7310, HHPS 7311, HHPS 5430, HHPS 7314.
Prerequisites for Exercise Science: HHPS 7301, HHPS 7302, HHPS 7303, HHPS 7320, HHPS 7321, HHPS 7322, HHPS 7323, HHPS 7324.
Prerequisites for Sports Management: HHPS 7301, HHPS 7302, HHPS 7303, HHPS 7330, HHPS 7331, HHPS 7332, HHPS 7333, HHPS 7334, HHPS 7335.

HHPS 7699 - Thesis

Six credit hours.

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. All students must pass comprehensive examinations before enrolling in this course.

Prerequisite: for Health Education: HHPS 7301, HHPS 7302, HHPS 7303, HHPS 7310 HHPS 7311, HHPS 5430, HHPS 7313.
Prerequisites for Exercise Science: HHPS 7301, HHPS 7302, HHPS 7303, HHPS 7320, HHPS 7321, HHPS 7322, HHPS 7323, HHPS 7324.
Prerequisites for Sports Management: HHPS 7302, HHPS 7303, HHPS 7330, HHPS 7331, 7332, HHPS 7333, HHPS 7334, 7335.

Higher Education

HIED 7300 - HIED in the US

Three credit hours.

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.

Prerequisites: Graduate Status

HIED 7331 - College Instruction

Three credit hours.

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.

Prerequisites: graduate status.

HIED 7347 - Practicum: Health Professions Teaching/Learning

Three credit hours.

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.

Prerequisites: HIED 7331, HIED 8332, EDFN 7313, EDFN 7370.

HIED 7348 - Internship: Health Professions Teaching/Learning

Three credit hours.

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.

Prerequisites: HIED 7331, HIED 8332, EDFN 7313, EDFN 7370.

HIED 7349 - Thesis: Health Professions Teaching/Learning

Three credit hours.

Masters students will demonstrate theoretical knowledge and methods of education research to complete and defend an original thesis project.

Prerequisites: Completion of 3 hours of HIED degree requirement or consent of instructor.

HIED 7350 - The American College Student

Three credit hours.

Prerequisite: HIED 7300, HIED 7351. This course familiarizes students with historical and contemporary student populations in American higher and postsecondary education. Students will explore college choice, retention, environmental impact, graduate students, and long-term effects of college. This course is essential for graduate students who develop and administer programs for college students.

Prerequisites: HIED 7300 and HIED 7351

HIED 7351 - Foundations in College Student Affairs

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: HIED 7300.

HIED 8145 - Seminar

One credit hour.

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.

Prerequisites: graduate status.

HIED 8160 - Practicum in Higher Education

One credit hour.

Supervised work or study in an area the student has studied.

Prerequisites: graduate status, consent of advisor and practicum supervisor.

HIED 8161 - Workshop

One credit hour.

Practical, concentrated (from a few hours to a week) consideration of selected topics of current interest to practitioners.

Prerequisites: consent of instructor.

HIED 8245 - Seminar

Two credit hours.

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.

Prerequisites: graduate status.

HIED 8260 - Practicum in Higher Education

Two credit hours.

Supervised work or study in an area the student has studied.

Prerequisites: graduate status, consent of advisor and practicum supervisor.

HIED 8261 - Workshop

Two credit hours.

Practical, concentrated (from a few hours to a week) consideration of selected topics of current interest to practitioners.

Prerequisites: consent of instructor.

HIED 8301 - History and Philosophy of Higher Education

Three credit hours.

Prerequisite: graduate status. Development, evolution of higher education as a dynamic social, political institution; emphasis on past philosophies, assumptions that undergraduate diverse colleges, universities today.

Prerequisites: Graduate Status

HIED 8320 - The Two-Year College in America

Three credit hours.

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.

Prerequisites: graduate status.

HIED 8321 - Organization and Administration of Two-Year Colleges

Three credit hours.

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.

Prerequisites: graduate status.

HIED 8322 - Issues and Challenges in Two-Year College Leadership

Three credit hours.

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.

Prerequisites: graduate status.

HIED 8330 - College Teaching: Problems and Issues

Three credit hours.

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.

Prerequisites: EDFN 7373 and EDFN 8306.

HIED 8332 - Curriculum Design in Higher Education

Three credit hours.

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.

Prerequisites: EDFN 7373 and EDFN 8306.

HIED 8333 - College and University Faculty

Three credit hours.

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.

Prerequisites: EDFN 7373 and EDFN 8306.

HIED 8340 - Organizational Behavior in Higher & Post-Secondary Education

Three credit hours.

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.

Prerequisites: graduate status.

HIED 8341 - Financing of Colleges and Universities

Three credit hours.

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.

Prerequisites: EDFN 8306 and EDFN 7373.

HIED 8342 - Governance and Policy Making in Higher Education

Three credit hours.

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.

Prerequisites: EDFN 8306 and EDFN 7373.

HIED 8343 - Legal Aspects of Higher Education

Three credit hours.

Legal rights, responsibilities of faculty, students, staff, administrators, governing board members.

Prerequisites: graduate status.

HIED 8344 - Legal Aspects of Teaching

Three credit hours.

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.

Prerequisites: graduate status.

HIED 8345 - Seminar

Three credit hours.

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.

Prerequisites: graduate status.

HIED 8350 - The American College Student

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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 8360 - Practicum in Higher Education

Three credit hours.

Supervised work or study in an area the student has studied.

Prerequisites: graduate status, consent of advisor and practicum supervisor.

HIED 8361 - Workshop

Three credit hours.

Practical, concentrated (from a few hours to a week) consideration of selected topics of current interest to practitioners.

Prerequisites: consent of instructor.

HIED 8370 - Policy and Politics in Higher Education

Three credit hours.

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.

Prerequisites: doctoral Status.

HIED 8390 - Research Practicum in Higher Education

Three credit hours.

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.

Prerequisites: HIED 8311, EDFN 8383 and EDFN 8308.

HIED 8397 - Internship

Three credit hours.

Supervised field experience in college or university setting provides work experience putting theory into practice.

Prerequisites: graduate status, consent of instructor and internship supervisor.

HIED 8399 - Dissertation Seminar

Three credit hours.

(Open only to doctoral students.) Formulation of topic for dissertation research; development of dissertation prospectus in form satisfactory to student's doctoral committee.

Prerequisites: consent of instructor, student's doctoral chair.

HIED 8445 - Seminar

Four credit hours.

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.

Prerequisites: graduate status.

HIED 8545 - Seminar

Five credit hours.

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.

Prerequisites: graduate status.

HIED 8645 - Seminar

Six credit hours.

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.

Prerequisites: graduate status.

HIED 8697 - Internship

Six credit hours.

Supervised field experience in college or university setting provides work experience putting theory into practice.

Prerequisites: graduate status, consent of instructor and internship supervisor.

HIED 8697 - Internship

Six credit hours.

Supervised field experience in college or university setting provides work experience putting theory into practice.

Prerequisites: graduate status, consent of instructor and internship supervisor.

HIED 9199 - Dissertation

One credit hour.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9299 - Dissertation

Two credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9390 - Dissertation Colloquium

Three credit hours.

Development of various components of doctoral-level dissertation. study, submit a manuscript for major peer-reviewed journal review, and prepare a research proposal for national conference presentation.

Prerequisites: dissertation prospectus approved.

HIED 9390 - Dissertation Colloquium

Three credit hours.

Development of various components of doctoral-level dissertation.

Prerequisites: dissertation prospectus approved.

HIED 9399 - Dissertation

Three credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9499 - Dissertation

Four credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9599 - Dissertation

Five credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9699 - Dissertation

Six credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9799 - Dissertation

Seven credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9899 - Dissertation

Eight credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

HIED 9999 - Dissertation

Nine credit hours.

Development of doctoral-level research paper or field-based project.

Prerequisites: consent of committee chair.

History

HIST 5302 - Magic, Science, and the Occult from Antiquity to Newton

Three credit hours.

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.

HIST 5303 - The Roman Revolution

Three credit hours.

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

Three credit hours.

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.

HIST 5305 - Environmental History

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

HIST 5313 - Apocalypse Now and Then: A History of Apocalyptic Thought and Movements

Three credit hours.

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.

HIST 5314 - A History of the Future: Millennial Visions in Film and Literature

Three credit hours.

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.

HIST 5315 - Religious History of the United States

Three credit hours.

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.

HIST 5318 - Modern Revolutions: From France to China

Three credit hours.

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.

HIST 5326 - History of Atlantic World

Three credit hours.

This course examines the processes which brought together the history of Europe, Africa, North America and South America across the Atlantic Ocean. Major themes include the Atlantic Ocean as frontier and zone of interaction as well as political, economic and social changes resulting from inter-Atlantic connections. Dual-listed in the UALR Undergraduate Catalog as HIST 4326. Three credit hours.

HIST 5327 - Africa in World History

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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 5335 - History at the Movies

Three credit hours.

This course is designed to introduce students of the past to the potentials and pitfalls of film as a medium of historical exposition. Over the course of the twentieth century, the movies became a primary medium of artistic and commercial expression. The advent of commercial film-making in America also marked the first appearance of a particular "genre" of cinematic form-a "historical drama" was one of the first full-length feature films made in the United States, in 1915. Entitled Birth of a Nation, the movie purported to be a historical "facsimile" that chronicled the aftermath of the Civil War in the United States. Its commercial success guaranteed that movies with historical themes would continue to be made. Ever since, the makers of motion pictures have found the past to be a creative playground and a lucrative idiom. How do these movies relate to History? Dual-listed in the UALR Graduate Catalog as HIST 5335. Three credit hours.

HIST 5340 - Slavery in North America

Three credit hours.

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

Three credit hours.

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.

HIST 5346 - Violence in Medieval Europe

Three credit hours.

This course examines various forms of violence in medieval European societies, the role of violence in maintaining or disrupting social order, and medieval efforts to regulate violent behaviors.

HIST 5347 - Age of Charlemagne

Three credit hours.

This course explores the history of Western Europe in the eighth and ninth centuries CE. The Carolingian dynasty of Charlemagne is best known for its political and military domination and for the cultural and intellectual achievements it fostered (the "Carolingian Renaissance"). We will examine both of these topics in detail, but we will also aim for a fuller picture of the Carolingian world, including its institutions and social structures, its economy, its cultural assumptions, and the patterns of life for the men and women who lived far from the imperial court. Dual-liste4d in UALR Undergraduate Catalog as HIST 4347.   Three credit hours.

HIST 5350 - The United States and the Middle East

Three credit hours.

The development of American foreign policy in the Middle East from the Treaty of Versailles to the emergence of Al-Qaeda.

HIST 5356 - Hist Race & Ethnicity in US

Three credit hours.

A survey of the history of race an ethnicity in the United States from prehistory to present with a special focus on selected topics in the experience of African Americans, Asian Americans, European Americans, Latino Americans, and Native Americans. Dual-Listed in UALR Undergraduate Catalog as HIST 4356.

HIST 5358 - Civil Rights Movement Sn 1954

Three credit hours.

An examination of race relations in the United States from the landmark 1954 Brown v. Board of Education U.S. Supreme Court school desegregation decision to present, looking at among other topics the impact of the Civil Rights Movement, the Black Power Movement, Busing, and Affirmative Action. Dual-listed in UALR Undergraduate Catalog as HIST 4358.

HIST 5363 - Law in American History

Three credit hours.

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.

HIST 5368 - African American Hist to 1835

Three credit hours.

An overview of the African American experience from Slavery to Civil War and Emancipation, examining political, cultural, social, legal, constitutional, and economic developments. Dual-listed in the UALR Undergraduate Catalog as HIST 4368. Three credit hours.

HIST 5369 - African American Hist Sn 1835

Three credit hours.

An overview of the African American experience from Civil War and Emancipation through Reconstruction, the Age of Segregation, the Civil Rights Movement, and the Black Power Movement to present, examining political, cultural, social, legal, constitutional, and economic developments. Dual-listed in the UALR Undergraduate Catalog as HIST 4369. Three credit hours.

HIST 5373 - History of Family and Childhood in Modern Europe

Three credit hours.

The course introduces students to the history of childhood and family life in the nineteenth and twentieth Century Europe.

HIST 5375 - Modern Mexican History

Three credit hours.

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

Three credit hours.

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.

HIST 5390 - Special Topics in History

Three credit hours.

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.

Prerequisites: Specialized study of selected topics in history.

HIST 5391 - Seminar in United States History.

Six credit hours.

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.

Prerequisites: History 2311, 2312, three hours of upper-level United States history.

HIST 5393 - Seminar in World History

Three credit hours.

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.

HIST 5396 - Seminar in Arkansas History

Three credit hours.

Discussion, directed readings, research, writing on selected issues. Topics vary each semester. may be repeated once with new topic.

HIST 5397 - Teaching Applications

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

History of historical journal, documents editing, publishing historical materials.

HIST 7370 - Oral History

Three credit hours.

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

HIST 7372 - Digital History

Three credit hours.

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

Three credit hours.

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.

Prerequisites: consent of coordinator and, if applicable, supervisory agency.

HIST 7391 - Seminar in Public History

Three credit hours.

(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.

Prerequisites: HIST 5303, HIST 7311, HIST 7315.

HIST 7392 - Seminar in Early America

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Employment, practical experience in community agency, under professional guidance, in concentration area; requires written report.

Prerequisites: 24 program hours; consent of coordinator.

HIST 7399 - Thesis Seminar

Three credit hours.

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

Six credit hours.

Scholarly investigation involving original research.

Prerequisites: consent of coordinator.

Interdisciplinary Studies

IDST 7310 - Introduction to Interdisciplinary Studies

Three credit hours.

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

Three credit hours.

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.

Prerequisites: IDST 7310.

IDST 7391 - Interdisciplinary Capstone

Three credit hours.

In this course, MAIS students will complete an interdisciplinary capstone experience by completing a research paper, creative paper or project, applied project, or portfolio of work. A research document and/or reflective essay may be required for creative and applied projects and portfolios.

Prerequisites: IDST 7310 and the completion of the majority of the MAIS degree plan.

IDST 7396 - Special Topics in Interdisciplinary Studies

Three credit hours.

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

IDST 8310 - Interdisciplinary Studies Thesis/Final Project

Three credit hours.

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.

IDST 8320 - Interdisciplinary Studies Thesis/Final Project

Three credit hours.

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.

International Business

IBUS 5316 - Field Study in International Business

Three credit hours.

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.

Prerequisites: Completion of MBA Foundation courses or equivalent.

Information Science

IFSC 5199 - Special Topics

One credit hour.

Advanced, specialized topics of current interest in information science. May be repeated for no more than 12 hours of credit. One, two, three or

IFSC 5299 - Special Topics

Two credit hours.

Advanced, specialized topics of current interest in information science. May be repeated for no more than 12 hours

IFSC 5302 - Strategies for Innovation

Three credit hours.

This interdisciplinary 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 hands-on course draws on interdisciplinary resources and will include readings, lecture, discussion, writing, and small group activities. IFSC 5302 is not open to students who already have credit for IFSC 5302, TINV 4301 or TINV 5301, or MUAP 4320 or MUAP 5320. Cross listed as TINV 4301/TINV 5301 and MUAP 4320/MUAP 5320.

Prerequisites: Junior or senior standing (IFSC 4302) or graduate standing (IFSC 5302).

IFSC 5325 - Data Mining Concepts and Techniques

Three hours lecture. Three credit hours.

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.

Prerequisites: IFSC 4325: IFSC 3330 or equivalent or consent of instructor and Graduate status for IFSC 5325.

IFSC 5325 - Data Mining Concepts and Techniques

Three hours lecture. Three credit hours.

In-depth, practical coverage of essential data mining topics, including OLAP and data warehousing, data pre-processing, concept description, association rules, classification and prediction, and cluster analysis. Advanced topics including mining object-relational databases, spatial databases, multimedia databases, time-series databases, text databases, the World Wide Web, and application in several fields.

Prerequisites: IFSC 3320 or equivalent or consent of the instructor.

IFSC 5330 - Database Security

Three hours lecture. Three credit hours.

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.

Prerequisites: IFSC 3330 or equivalent or consent of the instructor.

IFSC 5339 - Network Security

Three hours lecture. Three credit hours.

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.

Prerequisites: MATH 1304 or equivalent and IFSC 3315 or CPSC 4384 or SYEN 3332 or MGMT 4310 or consent of the instructor.

IFSC 5345 - Information Visualization

Three hours lecture. Three credit hours.

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.

Prerequisites: MATH 1451 and IFSC 2300.

IFSC 5360 - Social Computing

Three hours lecture. Three credit hours.

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.

Prerequisites: IFSC 1310 and IFSC 2300, or equivalent, or consent of Instructor.

IFSC 5399 - Special Topics

Three credit hours.

Advanced, specialized topics of current interest in information science. May be repeated for no more than 12 hours of credit. One, two, three or

IFSC 7100 - Independent Study

One credit hour.

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.

Prerequisites: graduate standing and consent of the instructor.

IFSC 7101 - Research Methodology

One credit hour.

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.

Prerequisites: graduate standing.

IFSC 7102 - Research Tools

One credit hour.

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.

Prerequisites: graduate standing.

IFSC 7103 - Research Applications

One credit hour.

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 7101/IFSC 7101/CPSC 7101 or CPSC 7102.

Prerequisites: SYEN 7101/IFSC 7101/CPSC 7101 and CPSC 7102.

IFSC 7186 - Graduate Project

One credit hour.

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. May be repeated for credit.

Prerequisites: graduate standing and consent of the student's graduate advisor.

IFSC 7192 - Graduate Seminar

One credit hour.

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.

Prerequisites: graduate standing, consent of graduate coordinator.

IFSC 7198 - Graduate Thesis

One credit hour.

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. May be repeated for credit.

Prerequisites: consent of thesis advisor.

IFSC 7200 - Independent Study

Two credit hours.

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.

Prerequisites: graduate standing and consent of the instructor.

IFSC 7286 - Graduate Project

Two credit hours.

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. May be repeated for credit.

Prerequisites: graduate standing and consent of the student's graduate advisor.

IFSC 7298 - Graduate Thesis

Two credit hours.

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. May be repeated for credit.

Prerequisites: consent of thesis advisor.

IFSC 7300 - Independent Study

Three credit hours.

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.

Prerequisites: graduate standing and consent of the instructor.

IFSC 7310 - Information Systems Analysis

Three credit hours.

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.

IFSC 7320 - Database Systems

Three credit hours.

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

Three credit hours.

This course surveys the major topics in information science including a discussion of entropy, value strategies, security, extraction, and emission of information.

Prerequisites: graduate Standing.

IFSC 7325 - Deep Learning Theory and Apps

Three credit hours.

Deep learning is an emerging area of machine learning with broad applications in data science, data mining, bioinformatics, and Artificial Intelligence. Deep learning is about learning multiple levels of representation and abstraction that help to make sense of data such as images, text, sound, and video. This course offers a mathematical and conceptual background of deep learning. It teaches deep learning techniques used by practitioners in industry, including deep feedforward networks, convolutional networks, and deep belief networks; and it surveys such applications as pattern recognition and data mining from big data including texts, images, and social networks.

Prerequisites: IFSC 5325 or permission of the instructor.

IFSC 7331 - Network Science

Three hours lecture. Three credit hours.

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.

IFSC 7360 - Data Protection and Privacy

Three credit hours.

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

Three credit hours.

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.

Prerequisites: graduate standing and either IFSC 7320 or CPSC 7351 along with working knowledge of Java programming or consent of the instructor.

IFSC 7386 - Graduate Project

Three credit hours.

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. May be repeated for credit.

Prerequisites: graduate standing and consent of the student's graduate advisor.

IFSC 7398 - Graduate Thesis

Three credit hours.

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. May be repeated for credit.

Prerequisites: consent of thesis advisor.

IFSC 7399 - Special Topics

Three credit hours.

The course explores an emerging or advanced, specialized topic of current interest in information science. May be repeated for credit when subject varies.

Prerequisites: graduate standing and consent of the instructor.

IFSC 7486 - Graduate Project

Four credit hours.

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. May be repeated for credit.

Prerequisites: graduate standing and consent of the student's graduate advisor.

IFSC 7498 - Graduate Thesis

Four credit hours.

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. May be repeated for credit.

Prerequisites: consent of thesis advisor.

IFSC 7586 - Graduate Project

Five credit hours.

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. May be repeated for credit.

Prerequisites: graduate standing and consent of the student's graduate advisor.

IFSC 7598 - Graduate Thesis

Five credit hours.

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. May be repeated for credit.

Prerequisites: consent of thesis advisor.

IFSC 7686 - Graduate Project

Six credit hours.

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. May be repeated for credit.

Prerequisites: graduate standing and consent of the student's graduate advisor.

IFSC 7698 - Graduate Thesis

Six credit hours.

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. May be repeated for credit.

Prerequisites: consent of thesis advisor.

Integrated Science and Mathematics

IGSC 5401 - Integrated Science Methods

Three hours lecture. Two hours laboratory per week. Four credit hours.

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.

Prerequisites: At least 16 hours of science.

IGSC 7192 - Independent Study

One credit hour.

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 - Internship in Integrated Science and Mathematics

One credit hour.

Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. Forty hours supervised work per credit hour.

Prerequisites: graduate standing and consent and approval of assignment by advisor.

IGSC 7199 - Special Topics

One credit hour.

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.

Prerequisites: variable, depending on instructor and course content.

IGSC 7292 - Independent Study

Two credit hours.

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 7295 - Internship in Integrated Science and Mathematics

Two credit hours.

Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. Forty hours supervised work per credit hour.

Prerequisites: graduate standing and consent and approval of assignment by advisor.

IGSC 7299 - Special Topics

Two credit hours.

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.

Prerequisites: variable, depending on instructor and course content.

IGSC 7301 - Higher Order Thinking in Science

Two hours lecture. Two hours laboratory per week. Three credit hours.

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.

Prerequisites: consent of the instructor.

IGSC 7391 - Cooperative Education in Integrated Science

Three credit hours.

Supervised professional experience related to students discipline with governmental agencies, industry, and consulting firms. This course requires a minimum of 200 semester work hours.

Prerequisites: Graduate standing and consent and approval of assignment by advisor.

IGSC 7392 - Independent Study

Three credit hours.

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 7395 - Internship in Integrated Science and Mathematics

Three credit hours.

Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. Forty hours supervised work per credit hour.

Prerequisites: graduate standing and consent and approval of assignment by advisor.

IGSC 7399 - Special Topics

Three credit hours.

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.

Prerequisites: variable, depending on instructor and course content.

IGSC 7499 - Special Topics

Four credit hours.

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.

Prerequisites: variable, depending on instructor and course content.

IGSC 8100 - Thesis Research

One credit hour.

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.

IGSC 8200 - Thesis Research

Two credit hours.

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.

IGSC 8300 - Thesis Research

Three credit hours.

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.

Information Quality

INFQ 7191 - Cooperative Education in Information Quality

One credit hour.

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 cannot be used for credit toward the requirements for the Masters in Information Quality degree without the special approval from the MSIQ Graduate Coordinator. The course may be repeated for credit.

Prerequisites: Graduate standing and approval of assignment by the faculty sponsor and the graduate coordinator.

INFQ 7198 - Thesis

One credit hour.

Student's should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Prerequisites: Consent of thesis advisor.

INFQ 7291 - Cooperative Education in Information Quality

Two credit hours.

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 cannot be used for credit toward the requirements for the Masters in Information Quality degree without the special approval from the MSIQ Graduate Coordinator. The course may be repeated for credit.

Prerequisites: Graduate standing and approval of assignment by the faculty sponsor and the graduate coordinator.

INFQ 7298 - Thesis

Two credit hours.

Student's should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Prerequisites: Consent of thesis advisor.

INFQ 7300 - Independent Study

Three credit hours.

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.

Prerequisites: graduate standing and consent of the instructor.

INFQ 7303 - Principles of Information Quality

Three hours lecture. Three credit hours.

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.

Prerequisites: IFSC 2300 or equivalent.

INFQ 7318 - Total Quality Management and Statistical Quality Control

Three hours lecture. Three credit hours.

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.

Prerequisites: STAT 2350 or equivalent.

INFQ 7322 - Information Quality Theory

Three hours lecture. Three credit hours.

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.

Prerequisites: INFQ 7303.

INFQ 7337 - Project and Change Management

Three hours lecture. Three credit hours.

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.

Prerequisites: INFQ 7303.

INFQ 7342 - Information Quality Tools and Industry Landscape

Three hours lecture. Three credit hours.

This course teaches data quality analytics and data quality mining techniques for both structured data which conform to a clearly defined schema, and unstructured data which exist in the form of natural language text. Specific course topics include how data quality, data profiling, and entity resolution can be improved by applying techniques like pattern discovery, clustering, text retrieval, text mining and analytics, and data visualization using a variety of open source tools.

INFQ 7348 - Entity Resolution and IQ

Three credit hours.

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.

Prerequisites: INFQ 7342 or consent of instructor.

INFQ 7353 - Case Studies for Information Quality Professionals

Three hours lecture. Three credit hours.

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.

Prerequisites: INFQ 7322 and IINFQ 7342.

INFQ 7367 - Information Quality Policy and Strategy

Three hours lecture. Three credit hours.

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.

Prerequisites: INFQ 7322.

INFQ 7386 - Graduate Project

Three credit hours.

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.

Prerequisites: Graduate standing and consent of the student's graduate advisor.

INFQ 7391 - Cooperative Education in Information Quality

Three credit hours.

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 cannot be used for credit toward the requirements for the Masters in Information Quality degree without the special approval from the MSIQ Graduate Coordinator. The course may be repeated for credit.

Prerequisites: Graduate standing and approval of assignment by the faculty sponsor and the graduate coordinator.

INFQ 7398 - Thesis

Three credit hours.

Student's should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Prerequisites: Consent of thesis advisor.

INFQ 7399 - Special Topics

Three credit hours.

The course explores on an experimental or temporary basis advanced topic in information quality not included in the established curriculum. Content, subtitle, organization change each time offered, based on interest.

Prerequisites: graduate standing and consent of instructor.

INFQ 7498 - Thesis

Four credit hours.

Student's should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Prerequisites: Consent of thesis advisor.

INFQ 7598 - Thesis

Five credit hours.

Student's should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Prerequisites: Consent of thesis advisor.

INFQ 7686 - Graduate Project

Six credit hours.

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. INFQ 7386 may be repeated over two semesters.

Prerequisites: Graduate standing and consent of the student's graduate advisor.

INFQ 7698 - Thesis

Six credit hours.

Student's should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Prerequisites: Consent of thesis advisor.

Interpreting for The Deaf

INTR 5320 - Survey of Communication Methods

Three credit hours.

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.

International Studies

INTS 5301 - Independent Study in International Studies

Three credit hours.

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

Three credit hours.

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.

General Foreign Language

FREN 5361 - Seminar

Three credit hours.

In-depth exploration of advanced topics in French and francophone languages, literatures, and cultures. May be repeated when topic differs. Dual listed in the Undergraduate Catalog as FREN 4361.

Prerequisites: graduate standing and instructor consent

FREN 5362 - Seminar

Three credit hours.

In-dept exploration of advanced topics in French and francophone languages, literatures, and cultures. May be repeated when topic differs. Dual listed in the undergraduate Catalog as FREN 4362

Prerequisites: Graduate standing and instructor consent

LANG 5303 - Exploring US Latino Cultures

Three credit hours.

This course is designed to teach students in the service professions (e.g., nursing, social work, nonprofit and public service, business, criminal justice, construction management, education, public health, etc.) about issues relating to language and culture impacting U.S. Latino communities in Arkansas in order to help them provide better services to these communities. Because this course is taught in English, it does not meet many programs' language proficiency requirements.

LANG 5322 - Teaching Second Languages

Three credit hours.

Methods and materials used to teach skill development in modern second languages; techniques considered most effective and appropriate assessment strategies. Required for Required for foreign language teacher licensure and the ESL endorsement in the state of Arkansas.

Prerequisites: baccalaureate degree.

LANG 5323 - Second Language Acquisition

Three credit hours.

How second language is acquired by children and adults. A course for those preparing to teach students with limited English proficiency. Required for Required for ESL endorsement in the state of Arkansas.

Prerequisites: baccalaureate degree.

LANG 5324 - Teaching People of Other Cultures

Three credit hours.

Cultural issues for teaching students with limited English proficiency. Required for A required course for ESL endorsement in the state of Arkansas.

Prerequisites: baccalaureate degree.

LANG 5325 - Second Language Assessment

Three credit hours.

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.

Prerequisites: baccalaureate degree.

LANG 7100 - Workshop

One credit hour.

Interaction between students and professor on topic relevant to teaching in the discipline.

LANG 7200 - Workshop

Two credit hours.

Interaction between students and professor on topic relevant to teaching in the discipline.

LANG 7300 - Workshop

Three credit hours.

Interaction between students and professor on topic relevant to teaching in the discipline.

LANG 7311 - Teaching Listening and Speaking

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Practical application of the principles of second language teaching in public elementary and secondary schools, Intensive English Language Program, and adult ESL learning environments.

Prerequisites: LANG 5322.

LANG 7350 - Research in Second Language Education

Three credit hours.

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

Six credit hours.

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

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

Learning Systems Technology

LSTE 7101 - Independent Study

One credit hour.

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 7200 - Independent Study

Two credit hours.

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 7201 - Workshop in Learning Systems Technology

Two credit hours.

To meet special needs of students. Offered on demand

LSTE 7300 - Independent Study

Three credit hours.

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 7301 - Workshop in Learning Systems Technology

Three credit hours.

To meet special needs of students. Offered on demand

LSTE 7302 - Instructional Technology

Three credit hours.

These courses are 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 7303 - Foundations of eLearning

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Applications of microcomputers in the educational setting; includes parameters of microcomputers, standard and predicted uses in instruction. Offered all terms.

Prerequisites: LSTE 7303.

Learning Systems Technology

LSTE 7306 - Digital Photography and Learning Systems

Three demonstration and hours lecture. Three credit hours.

Concepts, theoretical foundations for production, use of still photography in the educational process; students photograph, process, arrange pictures for instructional applications. Offered in fall and summer.

Prerequisites: LSTE 7303.

LSTE 7307 - Research in Human-Technology Interaction

Three credit hours.

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

Three demonstration and hours lecture. Three credit hours.

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. Offered in spring and summer II.

Prerequisites: LSTE 7306.

LSTE 7309 - Administration of Learning Systems Technology

Three credit hours.

Problems, responsibilities in establishment, maintenance, improvement of educational media services in public schools, colleges, businesses, industries, medical professions. Offered in spring and summer II.

Prerequisites: LSTE 7303 LSTE 7305 LSTE 7310 LSTE 7320.

LSTE 7310 - Systematic Integration of Technology in Learning Systems

Three credit hours.

Production, application of interactive instructional units where the microcomputer is the controlling medium for such peripherals as laser disk players and CD-ROM units.

Prerequisites: LSTE 7303, LSTE 7305; EDFN 7313, EDFN 7314.

LSTE 7311 - Introduction to Instructional Design

Three credit hours.

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.

Prerequisites: LSTE 7303 and LSTE 7304 with grades of B or better.

LSTE 7313 - Perception Meaning and Messages

Three credit hours.

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.

Prerequisites: LSTE 7311.

LSTE 7315 - Instructional Design: Accessible and Universal

Three credit hours.

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.

Prerequisites: LSTE 7311.

LSTE 7316 - Applied Theories of Instructional Design

Three credit hours.

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.

Prerequisites: LSTE 7311.

LSTE 7317 - Mobile Learning Environments

Three credit hours.

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

Three credit hours.

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.

Prerequisites: LSTE 7303, LSTE 7305.

LSTE 7325 - Assessment in Learning Systems Technology

Three credit hours.

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.

Prerequisites: LSTE 7303, EDFN 7313, EDFN 7314.

LSTE 7329 - Trends in eLearning

Three credit hours.

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.

Prerequisites: LSTE 7311.

LSTE 7330 - Distance Learning Systems Technology

Three credit hours.

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.

Prerequisites: LSTE 7303, LSTE 7305, EDFN 7313, EDFN 7314.

LSTE 7350 - Internship

Three credit hours.

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.

Prerequisites: all required program courses.

LSTE 7360 - Seminar

Three credit hours.

Trends, problems of current, emerging technology pertaining to instruction. Offered on demand.

Prerequisites: LSTE 7303.

Mathematics

MATH 5199 - Selected Topics

One hour's lecture. One credit hour.

Content varies; see semester schedule. Offered on demand.

Prerequisites: graduate standing, consent of instructor.

MATH 5299 - Selected Topics

One hour's lecture. Two credit hours.

Content varies; see semester schedule. Offered on demand.

Prerequisites: graduate standing, consent of instructor.

MATH 5301 - Analysis I

Three credit hours.

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.

Prerequisites: MATH 2307, 3312.

MATH 5302 - Complex Analysis

Three hours lecture. Three credit hours.

Algebra of complex numbers, analytic functions, integration, power series, Laurent series, elementary conformal mappings.

Prerequisites: grade of C or greater in MATH 5303.

MATH 5303 - Advanced Calculus I

Three credit hours.

Real number system, sequences, limits, continuity, metric spaces, convexity, derivatives, linear analysis, implicit function theorem.

Prerequisites: MATH 2307, 3312.

MATH 5304 - Advanced Calculus II

Three credit hours.

Prerequisite: a grade of "C" or greater in MA TH 5303. Topics include: derivatives, mean value theorem, L'Hospital's rule, integration, sequences, and series of functions. Dual -listed in the UALR Undergraduate Catalog as MATH 4304. Three lecture hours per week. Three credit hours.

Prerequisites: MATH 4303/MATH 5303.

MATH 5305 - Financial Mathematics

Three credit hours.

Determining equivalent measures of interest; discounting; accumulating; determining yield rates; estimating the rate of return on a fund; amortization.

Prerequisites: Math 1451 or equivalent.

MATH 5306 - Topology

Three credit hours.

Topological spaces, connectedness, compactness, separation axioms, metric spaces, sequences, completeness, Urysohn's metrization theorem, homotopy, the fundamental group. Additional topics selected from The Tychonoff Theorem, compactifications. This course is not open to students with credit for MATH 4306. Dual listed in the Undergraduate Catalog as Dual-listed in the UALR Undergraduate Catalog as MATH 4306.

Prerequisites: a grade of C or greater in MATH 2350 and MATH 2453.

MATH 5308 - Integral Transform Theory

Three credit hours.

Linear differential equations; Laplace transform; functions of complex variable, integration by method of residues, Laplace transform inversion integral; Z- transform, Ztransform inversion integral, difference equations; Fourier series, Fourier transform.

Prerequisites: MATH 3322.

MATH 5323 - Numerical Analysis

Three credit hours.

Error analysis, solutions of equations, interpolation, approximations, numerical differentiation and integration, linear systems.

Prerequisites: MATH 2307 or equivalent, 3312 or equivalent; scientific programming language.

MATH 5361 - History of Mathematics I

Three credit hours.

This course will provide an overview of aspects of the history of mathematics from the early beginnings to the sixteenth century. This survey/seminar course is organized to focus on discussion, group work, inquiry-based learning approaches, and less lecture. Attention will be on how the history of mathematics is important in the teaching of mathematics. This course gives historical perspectives of number systems, numbers and operations, algebra, geometry, trigonometry, calculus, discrete mathematics, probability, statistics/data analysis, and measurement.

MATH 5362 - History of Mathematics II

Three credit hours.

This course will provide an overview of aspects of the history of mathematics from the sixteenth century to the present. This survey/seminar course is organized to focus on discussion, group work, inquiry-based learning approaches, and less lecture. Attention will be on how the history of mathematics is important in the teaching of mathematics. This course gives historical perspectives of number systems, numbers and operations, algebra, geometry, trigonometry, calculus, discrete mathematics, probability, statistics/data analysis, and measurement.

MATH 5399 - Selected Topics

One hour's lecture. Three credit hours.

Content varies; see semester schedule. Offered on demand.

Prerequisites: graduate standing, consent of instructor.

MATH 7311 - Advanced Linear Algebra

Three hours lecture. Three credit hours.

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.

Prerequisites: MATH 3312.

MATH 7312 - Computational Linear Algebra

Three hours lecture. Three credit hours.

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.

Prerequisites: MATH 3312 and MATH 4323.

MATH 7313 - Real Analysis

Three credit hours.

Set theory and axioms, functions of a real variable, Lévesque measure, differentiation and integration, Branch Spaces

Prerequisites: A grade of C or greater in MATH 4302/MATH 5302.

MATH 7322 - Advanced Differential Equations

Three credit hours.

Power series solutions, systems of differential equations, nonlinear ordinary differential equations, phase plane analysis, stability, differential equations and applications.

Prerequisites: MATH 3322.

MATH 7323 - Advanced Numerical Analysis I

Three credit hours.

Numerical solutions of linear operator equations, some nonlinear systems, optimization methods.

Prerequisites: MATH 4323, MATH 7311.

MATH 7324 - Advanced Numerical Analysis II

Three hours lecture. Three credit hours.

Numerical analysis of ordinary and partial differential equations.

Prerequisites: MATH 7323 and MATH 7325.

MATH 7325 - Partial Differential Equations

Three hours lecture. Three credit hours.

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.

Prerequisites: MATH 3322 or equivalent course.

MATH 7326 - Optimization

Three hours lecture. Three credit hours.

Linear and nonlinear programming.

Prerequisites: MATH 3312 and 3322 or equivalent courses.

MATH 7327 - Graph Theory

Three hours lecture. Three credit hours.

Graphs and subgraphs; trees; connectivity; Euler tours and Hamiltionian cycles; matchings; planar graphs; directed graphs; networks.

Prerequisites: MATH 3312 or equivalent course.

MATH 7330 - Theory of Finite Element Methods

Three hours lecture. Three credit hours.

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.

Prerequisites: Math 2453 and Math 3322 or equivalent.

MATH 7350 - Mathematical Statistics I

Three credit hours.

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

Three credit hours.

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

Three hours lecture. Three credit hours.

Multivariate distribution theory and quadratic forms; Linear models and least squares; Analysis of categorical data; Non-parametric statistics; Decision theory and Baysian inference.

Prerequisites: MATH 7350.

MATH 7390 - Teaching Collegiate Math

Three credit hours.

Research-based investigation of teaching college-level mathematics courses: placement, prerequisites, remedial courses, service courses, preparing syllabi, grading, technology, pedagogical strategies.

MATH 7395 - Master Research Project

Three credit hours.

Research and individual investigation on a topic in applied mathematics.

Prerequisites: 18 graduate hours.

MATH 7396 - Master Research Project in Collegiate Math Education

Three credit hours.

This course is built on a research project that explores the nature of students' understanding and misconception of collegiate mathematics. This course will introduce techniques for assessing students' skills and understanding, and develop teaching interventions to improve students' learning.

MATH 7399 - Selected Topics in Applied Mathematics

Three credit hours.

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.

Prerequisites: consent of instructor.

STAT 7353 - Linear/Non-Linear Regression

Three hours lecture. Three credit hours.

Differentiation of vectors and matrices; random vectors and matrices; distribution theory; full rank linear regression models; non-linear regression models. Students cannot repeat the course again and receive credit for a new course if they've previously taken MATH 7353. MATH 7353 is the same course.

Prerequisites: MATH 7350.

STAT 7354 - Experimental Design

Three hours lecture. Three credit hours.

Single factor experiments; Randomized blocks and Latin square designs; factorial designs; repeated measures; nested designs; response surfaces. Students cannot repeat the course again and receive credit for a new course if they've previously taken MATH 7354. MATH 7354 is the same course as STAT 7354.

Prerequisites: MATH 7350 (may be taken as a corequisite with the consent of the instructor).

STAT 7355 - Sampling Techniques

Three hours lecture. Three credit hours.

Simple random sampling; sampling for proportions; stratified random sampling; ratio estimators; systematic random sampling; cluster sampling; acceptance sampling. Students cannot repeat the course again and receive credit for a new course if they've previously taken MATH 7355. MATH 7355 is the same course as STAT 7355.

Prerequisites: MATH 7350 (may be taken as a corequisite with the consent of the instructor).

Middle Childhood Education

MCED 7100 - Workshop in Middle Childhood Education

One credit hours.

Hands-on experiences on various topics. MCED 7138, MCED 7238, MCED 7338 Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

MCED 7138 - Mathematics Education

One credit hours.

Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

MCED 7200 - Workshop in Middle Childhood Education

Two credit hours.

Hands-on experiences on various topics. MCED 7138, MCED 7238, MCED 7338 Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

MCED 7238 - Mathematics Education

Two credit hours.

Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

MCED 7300 - Workshop in Middle Childhood Education

Three credit hours.

Hands-on experiences on various topics. MCED 7138, MCED 7238, MCED 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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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 7338 - Mathematics Education

Three credit hours.

Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

MCED 7350 - Seminar in Middle Education

Three credit hours.

Variable content based on current issues, effective practices in middle level education of interest to in- service teachers.

Prerequisites: 24 graduate hours.

Mass Communication

MCOM 5350 - Design and Production

Three credit hours.

Decision-making in the editing process. Principles of typography and design for print and online media.

Prerequisites: junior status and MCOM 2320 or consent of instructor based on demonstrable professional experience.

MCOM 5352 - News Media and the First Amendment

Three credit hours.

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.

Prerequisites: junior standing; MCOM 3360 recommended prerequisite.

MCOM 5357 - Seminar in Radio-Television Journalism

Three credit hours.

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

Three credit hours.

Practice in gathering materials and writing in-depth stories on public affairs; emphasis on courts, police, government, education, ecology, the economy, and social issues.

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.

MCOM 5359 - Feature and Magazine Writing

Three credit hours.

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.

Prerequisites: MCOM 2320 and 2350.

MCOM 5370 - Hip Hop Music and Culture

Three hours lecture. Three credit hours.

This course provides a critical examination of Hip Hop in the US and its role as a communicative, linguistic, cultural,

political, and artistic resource and commodity. The course identifies and examines the foundations of Hip-Hop culture and rap music. Through readings, documentaries, discographies, and projects, students will develop an understanding of the conceptual fundamentals of hip-hop philosophy and the community from which it originated. Focus will be given to the implications of that background, music, style, and its impact on the nation and the globe. If taken at the 4000 level cannot be taken at the 5000 level.

MCOM 5372 - Sports Journalism

Three hours lecture. Three credit hours.

This course is designed to help students write about sports and sports figures and to help students more critically view the role of sports media in American culture. Students will examine the influence of/relationship between sports media and issues such as race, gender, nationalism, and capitalism/consumerism. Students will also examine issues in relation to journalism ethics and the production of sports media. If taken as 4372 cannot take as 5372.

MCOM 5375 - Journalistic Freedom and Responsibility

Three credit hours.

Journalistic ethics and practices; professional conduct, responsibilities of the journalist in a free society.

MCOM 5377 - Public Relations Ethics

Three hours lecture. Three credit hours.

An introduction to the legal and regulatory environment that affects the public relations profession and the ethical

standards and decision-making processes on which PR professionals must rely. The course provides an understanding of those interconnecting concepts and responsibilities with an emphasis on the individual process we use to make an ethical decision. If taken at the 4000 level cannot be retaken at the 5000 level.

MCOM 5378 - Government PR

Three hours lecture. Three credit hours.

An introduction to political PR, election campaign tactics, constituent relations, crisis communications, issue management, issue framing, strategic communications planning, and presidential PR. If taken as 4378 cannot take as 5378.

MCOM 5380 - Public Relations Writing

Three credit hours.

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.

Prerequisites: MCOM 2320 and 2350; MCOM 2350 may be corequisite.

MCOM 5381 - Public Relations Cases

Three credit hours.

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

Three credit hours.

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.

Prerequisites: junior standing and consent of instructor.

MCOM 5386 - Images of Minorities in the Media

Three credit hours.

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 - Special Problems in Mass Communication

One credit hour.

Individual work on selected problems in mass communication.

Prerequisites: consent of a graduate faculty member.

MCOM 7190 - Readings in Mass Communication

Individual readings of selected works in mass communication.

Prerequisites: consent of a graduate faculty member.

MCOM 7280 - Special Problems in Mass Communication

Two credit hours.

Individual work on selected problems in mass communication.

Prerequisites: consent of a graduate faculty member.

MCOM 7290 - Readings in Mass Communication

Two credit hours.

Individual readings of selected works in mass communication.

Prerequisites: consent of a graduate faculty member.

MCOM 7300 - Proseminar in Mass Communication

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Application of behavioral science methodology to news reporting, especially to reporting of governmental, public affairs.

MCOM 7315 - International Mass Communication

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: MCOM 4352/MCOM 5352 or equivalent.

MCOM 7331 - Internet Policy and Regulation

Three credit hours.

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

Three credit hours.

Methodological approaches to the study of mass communication structure, processes, effects; emphasis on survey and experimental research procedures and content analysis.

Prerequisites: MCOM 7310 or equivalent.

MCOM 7337 - Media Criticism

Three credit hours.

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

Three credit hours.

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 credit hours.

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

Three credit hours.

Media's comment function, policies, problems.

MCOM 7365 - New Media Writing and Producing

Three credit hours.

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

Three credit hours.

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 7380 - Special Problems in Mass Communication

Three credit hours.

Individual work on selected problems in mass communication.

Prerequisites: consent of a graduate faculty member.

MCOM 7390 - Readings in Mass Communication

Three credit hours.

Individual readings of selected works in mass communication.

Prerequisites: consent of a graduate faculty member.

MCOM 7398 - Professional Project

Three credit hours.

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 - Thesis

One credit hour.

A scholarly work, based on research that advances an original point of view in the discipline of journalism.

Prerequisites: successful completion of comprehensive examination.

MCOM 8200 - Thesis

Two credit hours.

A scholarly work, based on research that advances an original point of view in the discipline of journalism.

Prerequisites: successful completion of comprehensive examination.

MCOM 8300 - Thesis

Three credit hours.

A scholarly work, based on research that advances an original point of view in the discipline of journalism.

Prerequisites: successful completion of comprehensive examination.

MCOM 8400 - Thesis

Four credit hours.

A scholarly work, based on research that advances an original point of view in the discipline of journalism.

Prerequisites: successful completion of comprehensive examination.

MCOM 8500 - Thesis

Five credit hours.

A scholarly work, based on research that advances an original point of view in the discipline of journalism.

Prerequisites: successful completion of comprehensive examination.

MCOM 8600 - Thesis

Six credit hours.

A scholarly work, based on research that advances an original point of view in the discipline of journalism.

Prerequisites: successful completion of comprehensive examination.

Management

MGMT 5350 - Business Database Management

MBA Elective, MS in BISA Prerequisite course. Addresses the concepts and principles underlying the design and application of relational database management systems. The course provides an in-depth study of the key concepts of relational database systems. Projects, which typically are implemented using current commercial database management systems software, are used to reinforce most of the concepts. Dual listed in the Undergraduate Catalog as BINS 4350. This course is not open to students with credit for MGMT 4350.

MGMT 5361 - Business Plan/Product Intro

Three hours lecture. Three credit hours.

MBA or MS in BISA Elective. The role of the entrepreneur in new venture development. Identifying, assessing, and developing entrepreneurial opportunities. Dual listed in the Graduate Catalog as MGMT 5361. This course is not open to students with credit for MGMT 4361.

MGMT 5365 - Business Consulting

Three credit hours.

MBA or MS in BISA 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 outlying the problems and recommended solutions. This course is not open to students with credit for MGMT 4365.

Prerequisites: MGMT 5361 or consent of instructor.

MGMT 5366 - New Venture Launch

Three hours lecture. Three credit hours.

The course will focus on the basic steps required to plan, start and run a business by completing all activities involved in a startup. Students will work in teams to develop a consumer product or service and market it to customers. Requirements include identifying "real" business customers, defining and delivering products and services, and financing company operations. This real world, real time experience will be supplemented by classroom analysis and sharing of lessons.

Prerequisites: MGMT 4361 or consent of instructor.

MGMT 5383 - Issues in Entrepreneurship

Three credit hours.

MBA or MS in BISA Elective. A significant exposure to the entrepreneurial process. Interaction with real-world entrepreneurs, which will enhance the entrepreneurial decision-making abilities of the students. Entrepreneurs address topics such as ideation, the stat1up process, paths to financing, pivoting, technology ventures, family business, intrapreneurship, growth strategies, technology transfer, and franchising. This course is not open to students with credit for MGMT 4383.

MGMT 7101 - Developing Leadership Skills I

One credit hour.

MBA Core Course. Must be taken the first semester of the MBA program. 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 utilizing 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

One credit hour.

MBA Core Course. Must be taken in the last nine hours of the MBA program. 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.

Prerequisites: MGMT 7101.

MGMT 7180 - Strategy for Competitive Advantage I

One credit hour.

Must be taken the first semester of the MBA program. 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.

Concurrent: MGMT 7101

MGMT 7210 - Operations and Supply Chain Management

Two credit hours.

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.

Prerequisites: ECON 7200.

MGMT 7280 - Strategy for Competitive Advantage II

Two credit 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.

Prerequisites: MGMT 7180, MKTG 7311, MGMT 7210 (prerequisite concurrent), FINC 7311 (prerequisite concurrent) and enrollment in last semester or progression to the last nine MBA program hours.

MGMT 7310 - Management of Human Capital

Three credit hours.

MBA Core Course or MS in BISA 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

Three credit hours.

MBA or MS in BISA Elective. Problems associated with entrepreneurship; emphasis on small enterprises, feasibility studies of new small enterprises.

Prerequisites: ACCT 7302, FINC 7310, MKTG 7300 or equivalent courses.

MGMT 7312 - Team Development

Three credit hours.

MS in BISA Core Course or MBA Elective. Organizational theory and principles of developing and managing teams.

MGMT 7313 - Commercializing Innovations

Three credit hours.

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

Three credit hours.

MBA or MS in BISA 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

Three credit hours.

MBA or MS in BISA 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

Three credit hours.

MBA or MS in BISA 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

Three credit hours.

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

Three credit hours.

MBA or MS in BISA Elective. 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.

Prerequisites: All Core courses.

MGMT 7380 - Strategy for Competitive Advantage

MBA Core Course. and enrollment in last semester or progression to the last nine MBA program hours. The interdependent roles of all business disciplines are examined, relative to analyzing business situations. 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

Prerequisites: MKTG 7311

Corequisites: MGMT 7210 and FINC 7311

MGMT 7398 - Seminar in Current Topics

Three credit hours.

MBA or MS in MIS Elective. Topics of current importance, interest in management.

Prerequisites: Consent of instructor.

MGMT 7399 - Independent Study

Three credit hours.

MBA or MS in MIS Elective. Intensive research under faculty supervision on approved topic in area not covered in depth through regularly scheduled courses; research paper required.

Prerequisites: All Foundation courses, 12 credits of Core requirements, and consent of instructor.

Marketing

MKTG 7311 - Marketing for Profit and Growth

Three credit hours.

MBA Core Course or MS-BISA 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.

Prerequisites: Concurrent: ACCT 7100, ECON 7100, and FINC 7100.

Concurrent: ACCT 7100, ECON 7100, and FINC 7100.

MKTG 7312 - Markets Analysis

Three credit hours.

MBA or MS in BISA Elective. 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.

Prerequisites: ECON 7200.

Prerequisite concurrent: MKTG 7311.

MKTG 7313 - Marketing Research and Information Systems

Three credit hours.

MBA or MS in BISA Elective. Research methods, application to marketing decision-making; includes problem definition, research design, sampling, data collection and analysis, research presentation.

Prerequisites: ECON 7200.

Prerequisite concurrent: MKTG 7311.

MKTG 7314 - Product Innovation

Three credit hours.

MBA or MS in BISA Elective. 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.

Prerequisite concurrent: MKTG 7311.

MKTG 7316 - Global Marketing

Three credit hours.

MBA or MS in BISA Elective. 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.

Prerequisites: All Core courses.

MKTG 7320 - E-Commerce: Strategic Issues

Three credit hours.

MBA or MS in BISA Elective. Survey of Web Activity. Business models and other frameworks for evaluating and creating business strategies involving electronic networks. Infrastructures and technology issues. Ethical and policy issues.

Prerequisite concurrent: MKTG 7311 or equivalent.

MKTG 7330 - Services Marketing

Three credit hours.

MBA or BISA 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

Three credit hours.

MBA and MS in BISA 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

Three credit hours.

MBA or MS in BISA Elective. Intensive research under faculty supervision on an approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

Prerequisites: All Foundation Courses, 12 credits of Core Courses, and consent of instructor.

MKTG 8300 - Seminar in Current Topics

Three credit hours.

MBA or MS in BISA Elective. Topics of current importance, interest in marketing.

Prerequisites: Consent of instructor.

Applied Music

MUAP 5320 - Strategies for Innovation

Three credit hours.

In this course, students learn skill sets for creative thinking in an interdisciplinary environment, studying examples from multiple fields such as music, art, business, science, and entrepreneurship. Course activities include readings, lecture, discussion, writing, and small group projects. MUAP 5320 is not open to students who already have credit for MUAP 4320 or IFSC 4302 or IFSC 5302. Cross listed as TINV 4301/TINV 5301 and IFSC 4302/IFSC 5302.

Prerequisites: junior level standing in a major.

MUAP 7214 - Advanced Functional Piano

Two credit hours.

Intensive review of functional skills; development of harmonization skills, accompanying, transposition; uses common practice period, 20th-century elements.

Prerequisites: graduate standing, pass piano functional exam.

MUAP 7325 - Advanced Choral Conducting

Three credit hours.

Techniques required in performing major choral works of selected musical periods, specific composers, different genres of choral form from inception to present.

Prerequisites: undergraduate basic and choral conducting courses or consent of instructor.

Music Education

MUED 5192 - Special Studies

One credit hour.

Concentration on a specific area of music or music education. Offered on demand.

Prerequisites: graduate standing, consent of instructor.

MUED 5252 - Perspectives on Careers in Music

Two credit hours.

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.

Prerequisites: must have passed the upper-level qualifying jury in MUPR, as well as MUTH 2391 and MUTH 2292, or consent of instructor.

MUED 5292 - Special Studies

Two credit hours.

Concentration on a specific area of music or music education. Offered on demand.

Prerequisites: graduate standing, consent of instructor.

MUED 5315 - Teaching Music in Performance Ensembles

Three credit hours.

Students will explore methods and materials appropriate for effective music teaching in school ensembles. Topics will includes working with diverse students, selecting appropriate literature, teaching musicianship in an ensemble setting, assessment in the arts, and program development in bands, choirs, and orchestra. For music majors only.

MUED 5322 - Teaching General Music

Three credit hours.

Characteristics of child growth and their implications in music, establishing music objectives, translating objectives into a developmental sequence of experiences, understanding skills, and knowledge. A practical course for music teachers, emphasizing selection of music and methods of teaching of classroom music to children in elementary school.

MUED 5392 - Special Studies

Three credit hours.

Concentration on a specific area of music or music education. Offered on demand.

Prerequisites: graduate standing, consent of instructor.

MUED 7103 - Supervised Clinical Teaching in Music

One credit hour.

Application of music teaching skills and methods in area schools with special attention to adapting state curricula, teaching plans and methods to multicultural and inclusive classes. Requires at least 30 clock hours in public school music programs.

MUED 7112 - Vocal Pedagogy

One credit hour.

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 7201 - Music Curriculum Design

Two credit hours.

This course emphasizes the development of curricula in music. Inquiry and problem-based teaching strategies will be modeled. Students will learn procedures and strategies for developing music curricula in ensemble, general music, and applied studio settings.

MUED 7202 - Specialized Music Instructional Methods

Two credit hours.

This course is designed to provide experiences necessary for development of skills needed to design and plan music instruction in public schools. Students will explore current issues in education, particularly those issues related to music, and will examine instruction styles and teaching strategies relevant in music learning environments.

MUED 7322 - Advanced Elementary Music Education

Three credit hours.

Current principles, practices in elementary school music; most recent methods and materials, their applications to different school systems.

Prerequisites: MUED 3322, 3332, or equivalent.

MUED 7332 - Fine Arts Concept

Three credit hours.

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.

Prerequisites: graduate standing, BA in music or art.

MUED 7333 - Fine Arts Pedagogy

Three credit hours.

Skills for planning, teaching survey of fine arts curricula.

Prerequisites: MUED 7332; Instructional Resources in Education 4301 or 7302.

MUED 7370 - Assessment in Music Education

Three credit hours.

This course will help students think critically about assessment in music education. Students will gain fundamental understanding of prevalent philosophies and techniques of assessment in music contexts, as well as current trends in general education and relationships to practice in music education.

MUED 7373 - Foundations of Music Education

Three credit hours.

This course will help students think critically about music education and its history, functions, and roles in American society. Students will grain fundamental understanding of prevalent philosophies of music education, as well as current trends in general education and relationships to practice in music education.

MUED 7382 - Concepts of Music

Three credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

Private Music

MUPR 7100 - Applied Music-Private Instruction

One credit hour.

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.

Prerequisites: graduate-level proficiency demonstrated through audition before music faculty.

MUPR 7200 - Applied Music-Private Instruction

Two credit hours.

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.

Prerequisites: graduate-level proficiency demonstrated through audition before music faculty.

Music Theory

MUTH 7370 - Advanced Analysis

Three credit hours.

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.

Prerequisites: MUSC 1211, 1310, 1510, 1520, 2510, or equivalent.

Public Administration

PADM 5341 - Seminar in Comparative Public Administration Elective

Three credit hours.

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

Three credit hours.

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 - Independent Study in Public Administration Elective

One credit hour.

The independent study is given under the direction of a faculty member. 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 7230 - Independent Study in Public Administration Elective

Two credit hours.

The independent study is given under the direction of a faculty member. 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

Three credit hours.

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

Three credit hours.

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 7313 - Human Resource Management in the Public Sector

Three credit hours.

Policies, practices, issues of managing the human resource function in public and nonprofit organizations.

PADM 7323 - Public Financial Administration Required

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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 7329 - Mediation Seminar

Three credit hours.

Examines current research and theories regarding conflict and their application to the practice of mediation in a variety of conflict situations. Teaches skills necessary to serve as an impartial third-party, such as listening, questioning, creative problem-solving, moving beyond impasse, and caucusing. Addresses various mediation styles and types of mediation. Cross listed as LAW 6329.

PADM 7330 - Independent Study in Public Administration Elective

Three credit hours.

The independent study is given under the direction of a faculty member. 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 7331 - Problems in Public Administration Elective

Three credit hours.
Seminar on selected topics.

PADM 7332 - Politics and Bureaucracy Required

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Theories, concepts; emphasis on applications to practical administrative problems.

PADM 7338 - Public Personnel Problems and Issues Elective

Three credit hours.

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

Three credit hours.

Specialized needs of managing, reforming state government from comparative framework; emphasis on Arkansas.

PADM 7340 - Ethics in Public Administration Elective

Three credit hours.

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

Three credit hours.

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.

Prerequisites: Consent of instructor.

PADM 7342 - Public Revenue Management Elective

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Selected aspects, such as relations between levels of government, American federalism, federal fiscal relations, comparative administration, and emerging trends in intergovernmental relations.

PADM 7362 - Public Policy Analysis I

Three credit hours.

This course is the first of a two-course sequence in the use of data and evidence to support analysis of public problems, programs and policies. Course topics include problem definition and measurement; problem analysis; data visualization and presentation; stakeholder interviewing; sampling, survey and evaluation research; experimental and quasi-experimental research design; multivariate statistical analysis; and public values and ethics in policy analysis. Students with credit for PADM 7315 cannot take this course for credit.

PADM 7363 - Public Policy Analysis II

Three credit hours.

Public policy evaluation with an emphasis on developing future policies using quantitative, qualitative techniques; includes research design, computer applications, evaluation research, and substantive policy.

Prerequisites: PADM 7315.

PADM 7373 - Seminar in Public Administration Required

Three credit hours.

Analysis, linkage of theories, concepts in public administration, policy; emphasis on applying research to practice of public administration.

Prerequisites: 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.

PADM 7380 - Public Program Evaluation Elective

Three credit hours.

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.

Prerequisites: Consent of instructor.

PADM 7385 - Seminar in Public Policy Elective

Three credit hours.

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

Three credit hours.

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 7436 - Current Issues in Public and Nonprofit Management

Four credit hours.

This course covers both intellectual and practical issues facing public and nonprofit sector management over the past decade.

PADM 8000 - Thesis in Public Administration Elective

Variable credit of one to six credit hours.

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).

Prerequisites: 24 graduate hours; consent of coordinator.

Concurrent: final three to six hours with coordinator's approval.

PADM 8301 - Internship I in Public Administration Optional

Three credit hours.

(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.

Prerequisites: 30 graduate hours; consent of coordinator.

PADM 8302 - Internship II in Public Administration Optional

Three credit hours.

(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.

Prerequisites: 30 graduate hours; consent of coordinator.

Philosophy

PHIL 5280 - Topics in Philosophy

Two credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

PHIL 5380 - Topics in Philosophy

Three credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

Physics

PHYS 5199 - Special Topics

One, two, three, or four, or equivalent, hours lecture. One credit hours.

Advanced, specialized topics of current interest in physics and astronomy.

Prerequisites: consent of instructor.

PHYS 5299 - Special Topics

One, two, three, or four, or equivalent, hours lecture. Two credit hours.

Advanced, specialized topics of current interest in physics and astronomy.

Prerequisites: consent of instructor.

PHYS 5310 - Statistical Thermodynamics

One optional discussion and three hours lecture. Three credit hours.

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. Offered in spring on even years, or when in demand.

Prerequisites: PHYS 2322, 3323.

PHYS 5311 - Classical Mechanics

One optional discussion and three hours lecture. Three credit hours.

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.

Prerequisites: PHYS 2321, MATH 2306 or consent of instructor.

PHYS 5321 - Electromagnetism I

One optional discussion and three hours lecture. Three credit hours.

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. Offered in fall on even years.

Prerequisites: PHYS 2322.

PHYS 5331 - Modern Physics I

One optional discussion and three hours lecture. Three credit hours.

More detailed treatment of topics in Physics 3323; relativity, quantum mechanics, statistical physics, atomic and nuclear physics, elementary particles. Offered in spring on odd years.

PHYS 5340 - Solid State Physics

One optional discussion and three hours lecture. Three credit hours.

Structure of crystals, dispersion relations, specific heat, phonons, electric and magnetic properties of insulators and metals, band theory of metals, insulators and semiconductors, superconductivity.

PHYS 5350 - Quantum Mechanics I

One optional discussion and three hours lecture. Three credit hours.

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.

PHYS 5360 - High Energy and Nuclear Physics

One optional discussion and three hours lecture. Three credit hours.

Properties of the nuclei, nuclear structure and stability, quark-gluon structure of hadrons, thermodynamics of large ensembles of hadrons, nuclear reactions, instrumentation, and accelerators.

Prerequisites: PHYS 3323.

PHYS 5380 - Wave Motion/Optics

One optional discussion and three hours lecture. Three credit hours.

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. Offered in spring on even years.

Prerequisites: PHYS 2322.

PHYS 5399 - Special Topics

One, two, three, or four, or equivalent, hours lecture. Three credit hours.

Advanced, specialized topics of current interest in physics and astronomy.

Prerequisites: consent of instructor.

PHYS 5499 - Special Topics

One, two, three, or four, or equivalent, hours lecture. Four credit hours.

Advanced, specialized topics of current interest in physics and astronomy.

Prerequisites: consent of instructor.

PHYS 7199 - Selected Topics

One hour's lecture. Two hours laboratory per week. One credit hour.

Topics include modern physics, astronomy; assists professionals to remain current in these fields; laboratory emphasis on physics demonstrations, experiments, simple astronomical observations.

Prerequisites: four undergraduate physics hours, professional experience in some physics area, consent of instructor.

PHYS 7289 - Graduate Research

Two credit hours.

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.

Prerequisites: consent of department chairperson.

PHYS 7299 - Selected Topics

One hour's lecture. Two hours laboratory per week. Two credit hours.

Topics include modern physics, astronomy; assists professionals to remain current in these fields; laboratory emphasis on physics demonstrations, experiments, simple astronomical observations.

Prerequisites: four undergraduate physics hours, professional experience in some physics area, consent of instructor.

PHYS 7389 - Graduate Research

Three credit hours.

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.

Prerequisites: consent of department chairperson.

PHYS 7399 - Selected Topics

One hour's lecture. Two hours laboratory per week. Three credit hours.

Topics include modern physics, astronomy; assists professionals to remain current in these fields; laboratory emphasis on physics demonstrations, experiments, simple astronomical observations.

Prerequisites: four undergraduate physics hours, professional experience in some physics area, consent of instructor.

PHYS 7489 - Graduate Research

Four credit hours.

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.

Prerequisites: consent of department chairperson.

Political Science

POLS 5308 - Topics in Urban Studies

Three credit hours.

Cross listed as URST 5308.

POLS 5310 - Seminar in American National Government

Three credit hours.

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.

POLS 5320 - American Foreign Policy

Three credit hours.

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.

POLS 5330 - U.S.-Panamanian Relations: Decisions and Documents

Three credit hours.

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.

Prerequisites: graduate status; consent of the instructor is also required for on-line students.

POLS 5333 - Seminar in State Politics

Three credit hours.

Research on selected aspects of state politics such as comparative policy making, political culture variations, and problem solving.

POLS 5341 - Seminar in International Relations

Three credit hours.

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

Three credit hours.

Research on selected aspects of local politics such as community power structure, local autonomy, and comparative administration.

POLS 5345 - Clinton Presidency

Three credit hours.

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

Three credit hours.

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.

POLS 5356 - Urban Policy and Government

Three credit hours.

Course explores urban policy-aching 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. Cross listed as URST 5356.

POLS 5370 - Politics of the Middle East

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Major political ideas and doctrines of political thinkers from Plato Montesquieu, with emphasis on the contributions of each to the theory and practice of government.

POLS 5387 - Great Decisions in American Foreign Policy

Three credit hours.

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.

POLS 5390 - Modern Political Theory

Three credit hours.

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.

Psychology

PSYC 5300 - Drugs and Behavior

Three credit hours.

Effects of drug administration on ongoing behavior, learning; emphasis on drugs of clinical application, usage.

PSYC 5310 - Counseling Psychology

Three credit hours.

Field of counseling, its philosophy; emphasis on counseling relationship; includes educational, vocational, industrial, personal counseling.

PSYC 5311 - Lifespan Development Psychology

Three credit hours.

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

Three credit hours.

Areas of industrial psychology generally concerned with personnel work; includes predictors, criteria, related issues; statistical analysis for selection, placement; testing; interviews, other nontest procedures; personnel development; attitude measurement.

PSYC 5330 - Learning and Memory

Three credit hours.

Fundamental principles; includes parameters of reinforcement, secondary reinforcement motivation, extinction, discrimination, generalization.

PSYC 5336 - Cognitive Development

Three credit hours.

An introduction to the theories and research on the development of thinking in infants, children, and adolescents.

PSYC 5340 - Shaping of Human Behavior

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Nature, causes, treatment of disturbed behavior in children.

Prerequisites: condition 1.

PSYC 5385 - Psychology and Public Health

Three hours lecture. Field research and two hours laboratory per week. Three credit hours.

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.

PSYC 7230 - Graduate Seminar in Psychology

Two credit hours.

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

Three credit hours.

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 7330 - Graduate Seminar in Psychology

Three credit hours.

Readings in professional literature, extensive discussions under faculty guidance. Topic determined by student interest; may be repeated for credit with coordinator's permission.

PSYC 7335 - Industrial/Organizational Psychology

Three credit hours.

Basic concepts: content-includes issues in personnel, testing, organizations, human factors, professional questions.

PSYC 7340 - Advanced Behavioral Statistics

Three credit hours.

Theoretical survey of the most frequently applied statistics in the behavioral sciences; emphasis on conditions of application, computational techniques, interpretations.

PSYC 7345 - Computer Statistical Package: Use in Psychology

Three credit hours.

Large-scale computerized statistical systems; emphasis on SAS system, other packages (SPSS, etc.) may be used; variety of statistical techniques including correlation, ANOVA, MANOVA, etc.

PSYC 7350 - Training and Development

Three credit hours.

An examination of training and development in organizations. Emphasis on the importance of linking training to corporate strategy, research from cognitive psychology, instructional theory and motivation theory, needs assessment design, development, and evaluation of training programs.

PSYC 7360 - Deviant Behavior

Three credit hours.

Various forms of pathological, deviant behavior; emphasis on criminal behavior

PSYC 7361 - Social Psychology

Three credit hours.

How social factors (e.g., attractiveness, persuasion, group or organizational structure, cultural factors) influences individual's behavior; how persons of different characteristics interact with social factors and processes and physical environments.

PSYC 7362 - Advanced Developmental Psychology

Three credit hours.

This course takes a life-span perspective in covering the major areas of development. It will stress the use and application of the scientific method to the study of the development of the individual, as well as research designs used to measure developmental charges. This course is not designed for students working on a graduate degree in education

PSYC 7369 - Internship in Applied Psychology

Three credit hours.

Professional activity by agreement between, and under joint supervision of, department faculty and an outside agency. Nature and scope of activities and responsibility for supervision must be agreed on before enrollment. May be repeated for credit with coordinator's permission.

PSYC 7370 - Health Psychology

Three credit hours.

An overview of the contribution of psychology to the promotion and maintenance of health and the prevention and treatment of illness. Topics include behavioral risk factors associated with the development of illness, stress, and coping, substance use and abuse, nutrition, and weight control, exercise the hospitalization experience, and doctor/patient relationships.

PSYC 7371 - Professional Issues and Ethics in Psychology

Three credit hours.

Profession and ethical issues which affect the practice of professional psychology are explored. Readings in professional literature and intensive discussion of topics. Written critiques of journal articles in the APA style are required.

PSYC 7373 - Literature Review in Psychology

Three credit hours.

Bibliographic instruction and technical writing skills (at the graduate student level) are emphasized in weekly assignments involving reading of primary sources, discussion, and systematic written assignments. Assignments are designed to give experience in (1) conducting library searches, (2) evaluation research topics, (3) analyzing and interpreting research, (4) presenting reviews orally and in writing, (5) peer reviewing one another's work, and (6) revising manuscript drafts. The assignments culminate in a major review paper written within the student's area of research interest. In addition, students will begin developing a research proposal.

PSYC 7380 - Human Factors Psychology

Three credit hours.

An advanced survey of theories, principles, and research in areas related to human factors and cognition including perception, attention, pattern recognition, memory, language, decision making, and problem solving. Emphasis is on the application of psychological principles and theories to issues in human factors and ergonomics in order to solve real-world problems related to the human-machine interface and the use of technology.

PSYC 7385 - Introduction to Clinical Methods

Three credit hours.

Principal theories, techniques of psychotherapy, psychodiagnostics; study of case histories to identify maladaptive behavior patterns, formulate therapeutic goals.

PSYC 7390 - Advanced Gerontological Counseling

Three credit hours.

This course provides a theoretical framework and knowledge of concrete techniques used in counseling. It makes be taken before or with counseling practicum.

PSYC 7395 - Gerontological Counseling Practicum

Three credit hours.

This course gives practical experience in classroom and field settings in applying counseling theories in actual situations. Interviewing and short-term counseling skills are demonstrated, practiced in the classroom, and practiced in the field.

PSYC 7398 - Practicum in Applied Psychology

Three credit hours.

Directed research or other professional activity under individual faculty supervision. Enrollment and nature of activities must be agreed on before the semester begins. Maybe repeated for credit with coordinator's permission.

PSYC 7430 - Graduate Seminar in Psychology

Four credit hours.

Readings in professional literature, extensive discussions under faculty guidance. Topic determined by student interest; may be repeated for credit with coordinator's permission.

PSYC 7455 - Research Methods and Design in Psychology

Four credit hours.

Emphasis will be on basic principles of research design in the psychological sciences. Topics include the 'scientific method, types of research paradigms (including naturalistic observation, the case study, the survey, correlational research, and experimentation), factorial designs, internal and external validity, research ethics, and APA style manuscript writing. Part of the course will be devoted to a survey of traditional experimental area of psychology including learning, perception cognition, psychophysics, individual differences, and social/personality psychology. Students will read and gain experience critiquing published psychology research articles. Students will gain hands-on experience with the research process.

PSYC 7480 - Cognitive Psychology

Four credit hours.

This course examines research in a variety of cognitive domains including perception, learning memory, reasoning, problem solving, decision making, language, and artificial intelligence. Students will read, discuss, and critique published research articles in cognitive psychology. In the laboratory portion of the class, students will also explore research paradigms commonly used in cognitive psychology.

PSYC 7533 - Advanced Psychological Methods

Five credit hours.

Experience with computers preferred. Application of psychological statistic, testing methods to problem areas; emphasis on use in field situations; includes hypothesis testing, test construction and validation, scaling techniques for attitude measurement, introduction to multivariate models; requires work with statistical computer packages (e.g., SAS, SPSS).

PSYC 7669 - Internship in Applied Psychology

Six credit hours.

Professional activity by agreement between, and under joint supervision of, department faculty and an outside agency. Nature and scope of activities and responsibility for supervision must be agreed on before enrollment. May be repeated for credit with coordinator's permission.

PSYC 7698 - Practicum in Applied Psychology

Six credit hours.

Directed research or other professional activity under individual faculty supervision. Enrollment and nature of activities must be agreed on before the semester begins. Maybe repeated for credit with coordinator's permission.

PSYC 8000 - Thesis

Variable credit one to six credit hours.

Independent investigation involving original research, demonstrating knowledge, methods of scholarships, culminating in written thesis with oral defense.

Reading

READ 7107 - Special Topics in Literacy

One credit hour.

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 - Special Topics in Reading Education

One credit hour.

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.

Prerequisites: graduate standing, consent of instructor.

READ 7207 - Special Topics in Literacy

Two credit hours.

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 7293 - Special Topics in Reading Education

Two credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

READ 7306 - Literacy and Technology

Three credit hours.

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 7307 - Special Topics in Literacy

Three credit hours.

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 7310 - Literacy, Language, and Culture

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

Philosophy, administration, and techniques of curriculum design, including participation in development of a culturally pluralistic curriculum.

READ 7330 - Children's Literature Across the Curriculum

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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. Offered on demand.

READ 7353 - Diagnosis of Reading Difficulties II.

Three credit hours.

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.

READ 7354 - Teaching Reading in the Content Areas

Three credit hours.

This course focuses on exploring and using reading strategies to support the learning of content material.

READ 7356 - Practicum in Reading

Three credit hours.

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.

Prerequisites: READ 7352 or READ 7353.

READ 7357 - Seminar in Reading

Three credit hours.

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 and summer.

READ 7361 - Language and Reading Instruction in Early Childhood

Three credit hours.

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.

READ 7365 - Specialized Assessment in Early Literacy Instruction

Three credit hours.

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 7367 - Teaching Children with Dyslexia

Three credit hours.

This course is designed to provide practicing teachers and other educational professionals with an introduction to dyslexia, the myths and politics associated with the history of dyslexia, an overview of Arkansas law and special education law relating to assessment and intervention of children with dyslexia, dyslexia characteristics associated with development of the structure of language, and a review of literacy development as it relates to children with moderate or severe difficulties with learning to read from emergent to advanced stages of development.

READ 7370 - Advanced Practicum in Reading

Three credit hours.

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.

Prerequisites: READ 7356 or READ 7385.

READ 7385 - Formative Assessment and Interventions for Children with Dyslexia

Three credit hours.

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.

Prerequisites: READ 7353.

READ 7387 - Advanced Practicum for Dyslexia Therapists

Three credit hours.

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. Offered on demand.

READ 7393 - Special Topics

Three credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

READ 7393 - Special Topics in Reading Education

Three credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

READ 7395 - Comprehensive Literacy Model for School Improvement

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

This course examines contemporary models of reading, including information processing, interactive, transactional, psycholinguistic, socio-cognitive, 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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: Completion of 27 hours of emphasis requirements or consent of instructor.

READ 8351 - Specialist Thesis II

Three credit hours.

Completion and defense of thesis project.

Prerequisites: READ 8351.

READ 8399 - Doctoral Seminar

Three credit hours.

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 - Dissertation

One credit hour.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9299 - Dissertation

Two credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9399 - Dissertation

Three credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9499 - Dissertation

Four credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9599 - Dissertation

Five credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9699 - Dissertation

Six credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9799 - Dissertation

Seven credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9899 - Dissertation

Eight credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

READ 9999 - Dissertation

Nine credit hours.

Development of a doctoral-level dissertation.

Prerequisites: Completion of all course work; consent of instructor.

Rehabilitation of the Blind

RHBL 5102 - Workshop

One credit hour.

Offered on demand.

RHBL 5302 - WS: Basic Independent Living Skills for Individuals with Visual Impairments

Three credit hours.

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

One credit hour.

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

One credit hour.

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

One credit hour.

Methodologies for teaching recreation and leisure skills to adults with visual impairments. Offered on demand.

RHBL 7191 - Independent Study

One credit hour.

Offered on demand.

Prerequisites: consent of instructor.

RHBL 7193 - Special Topics

One credit hour.

In-depth study of a topic of special interest. Offered on demand.

RHBL 7270 - Interpersonal Skills Training for Counselors

Two credit hours.

Carkhuff, related models of interpersonal skills development; focus on developing skill in providing core conditions of a helping/counseling relationship. Offered on demand.

RHBL 7291 - Independent Study

Two credit hours.

Offered on demand.

Prerequisites: consent of instructor.

RHBL 7293 - Special Topics

Two credit hours.

In-depth study of a topic of special interest. Offered on demand.

RHBL 7302 - Techniques for Helping Relationships

Two credit hours.

Techniques and procedures for engaging in the 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

Three credit hours.

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.

Prerequisites: RHBL 5302 - WS: Basic Independent Living Skills for Individuals with Visual Impairments and RHBL 7312 - Braille and Relevant Formats.

RHBL 7311 - Methods of Teaching Adaptive Communication Skills to Persons with Visual Impairments

Three credit hours.

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.

Prerequisites: RHBL 7312 - Braille and Relevant Formats.

RHBL 7312 - Braille and Relevant Formats

Three credit hours.

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

Three credit hours.

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.

Prerequisites: consent of the instructor.

RHBL 7315 - Medical Aspects of Blindness and Associated Disabilities

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: graduate standing, consent of instructor.

RHBL 7318 - Advanced Methods of Mobility for the Blind

Three credit hours.

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.

Prerequisites: RHBL 7317, consent of instructor.

RHBL 7325 - Implications of Low Vision

Three credit hours.

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.

Prerequisites: RHBL 7315 - Medical Aspects of Blindness and Associated Disabilities or consent of the instructor.

RHBL 7326 - Seminar: Underserved Populations

Three credit hours.

RHBL 7326 will examine recent rehabilitation topics regarding blindness, low vision, and orientation and mobility research that will provide application skills for practitioners.

RHBL 7390 - Supervised Practice

Three credit hours.

Faculty supervised practice in the use of required skills and competencies in the rehabilitation of individuals with visual impairments in rehabilitation or education settings.

Prerequisites: consent of the instructor.

RHBL 7391 - Independent Study

Three credit hours.

Offered on demand.

Prerequisites: consent of instructor.

RHBL 7393 - Special Topics

Three credit hours.

In-depth study of a topic of special interest. Offered on demand.

RHBL 7395 - Internship

Three credit hours.

Professional rehabilitation work experiences in an appropriate rehabilitation or educational setting with individuals with visual impairments.

Prerequisites: consent of the instructor.

RHBL 7399 - Professional Project

Three credit hours.

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.

Prerequisites: consent of instructor.

Rhetoric and Writing

RHET 5202 - Teaching Writing in Secondary Schools

Two credit hours.

A methods course that is team-taught by the English and Rhetoric and Writing departments. Topics to be addressed include planning literature, reading, and composition instruction in English/Language Arts (ELA); implementing pedagogy and curriculum goals; addressing and integrating research and policy into planning and instruction; managing the ELA classroom and understanding students' lives relative to ELA literacy goals; evaluating and integrating textbooks and literature. To be taken in conjunction with English 5202.

Prerequisites: graduate standing.

RHET 5301 - Theories of Rhetoric and Writing

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5304 - Technical Style and Editing

Three credit hours.

Institutional and industrial style manuals; editing technical, business, government, scientific reports.

Prerequisites: RHET 3301 and RHET 3316 or RHET 3326, or consent of instructor.

RHET 5305 - Document Design

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5306 - Writing for Business and Government

Three credit hours.

Theory of and practice in writing for business and government organizations; includes writing strategies, appropriate diction, report formats.

Prerequisites: graduate standing.

RHET 5307 - Writing Software Documentation

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5315 - Advanced Persuasive Writing

Three credit hours.

Intensive study of classical and new rhetorics. Emphasis on solving rhetorical problems and producing a variety of persuasive texts.

Prerequisites: graduate standing.

RHET 5317 - The Personal Essay

Three credit hours.

This course introduces students to the study and practice of the personal essay as a genre with an emphasis on form, techniques, and research methods appropriate to shorter nonfiction. Students with credit for RHET 4317 may take this course for credit.

Prerequisites: graduate standing.

RHET 5318 - Memoir

Three credit hours.

The course introduces students to the study and practice of memoir as a genre with an emphasis on narrative structures, techniques, and research methods appropriate to extended nonfiction. Students with credit for RHET 4318 may take this course for credit.

Prerequisites: graduate standing.

RHET 5321 - Editing for Publication

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5322 - Advanced Editing

Three credit hours.

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.

Prerequisites: RHET 4/RHET 5304 or RHET 4/RHET 5321, or comparable skills as determined by the instructor.

RHET 5323 - Production for Editors

Three credit hours.

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.

Prerequisites: graduate standing or consent of the instructor.

RHET 5324 - Publishing Inside Out

Three credit hours.

Publishing Inside Out introduces students to the publishing process and provides insight into the roles and career paths available in publishing today. The course offers guided practice in conceiving and developing a proposal for a nonfiction book and teaches core skills in content editing, marketing research, and project development. Students with credit for RHET 4324 may take RHET 5324 for graduate credit.

RHET 5325 - Legal Writing, Reasoning, and Argument

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5326 - Technology of the Book

Three credit hours.

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 explore the future of the book, including print and digital books, and who will control the publishing process and profit from it. Students with credit for RHET 4326 may take RHET 5326 for graduate credit.

RHET 5345 - Topics in Persuasive Writing

Three credit hours.

Theory and practice of persuasion with topics varying each semester. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 5346 - Topics in Technical Communication

Three credit hours.

Theory and practice of technical communication; topics vary each semester. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 5347 - Topics in Nonfiction Writing

Three credit hours.

Theory and practice of nonfiction writing with topics varying each semester. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 5370 - Writing for Social Media

Three credit hours.

This course presents an overview of the need for social media writers and managers in the workplace. students will analyze online audiences and write content that will attract more readers, build trust with the readers, and keep them coming back. Students will create an editorial calendar based on a social media strategy, plan a social media campaign, and execute this plan by writing the content or managing a social media team. Can repeat the course at the 5000 level but cannot repeat the course at the 4000 level.

RHET 5371 - Writing on the Web

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5372 - Usability Testing and Design

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 5375 - Grant Writing

Three credit hours.

Survey, theory, and practice of grant writing (solicited and no 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.

Prerequisites: graduate standing.

RHET 7150 - Independent Study

One credit hour.

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.

Prerequisites: graduate standing and consent of instructor.

RHET 7161 - Editing Internship

One credit hour.

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 consulta

Prerequisites: graduate standing, recommendation of the departmental editing track coordinator.

RHET 7250 - Independent Study

Two credit hours.

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.

Prerequisites: graduate standing and consent of instructor.

RHET 7261 - Editing Internship

Two credit hours.

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 consulta

Prerequisites: graduate standing, recommendation of the departmental editing track coordinator.

RHET 7300 - Introduction to Research Methods

Three credit hours.

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

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 7311 - Rhetorical Theory

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 7312 - Language Theory

Three credit hours.

Research and theory concerning acquisition and nature of functional language competence, including oral and written language and the movement from oral to written discourse.

Prerequisites: graduate standing.

RHET 7313 - Theory of Technical Communication

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 7314 - Foundations of Creative Nonfiction

Three credit hours.

This course provides students with an exploration of nonfiction genre theory with emphasis on the origin and history of genres central to nonfiction.

Prerequisites: graduate standing.

RHET 7320 - Working with Writers

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 7330 - Topics in Nonfiction Writing

Three credit hours.

Advanced study of theoretical, practical, or pedagogical topics related to nonfiction writing. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 7331 - Topics in the Essay

Three credit hours.

Advanced study of theoretical, practical, or pedagogical topics related to the essay. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 7332 - Topics in Extended Nonfiction

Three credit hours.

Advanced study of theoretical, practical, or pedagogical topics related to extended nonfiction writing. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 7333 - Topics in Editing and Publishing

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 7335 - Topics in Rhetoric

Three credit hours.

Advanced study of theoretical, practical, or pedagogical topics related to rhetoric. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 7336 - Technology of the Book

Three credit hours.

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

Three credit hours.

Advanced study of theoretical, practical, or pedagogical topics related to technical communication. May be repeated for credit when topic varies.

Prerequisites: graduate standing.

RHET 7350 - Independent Study

Three credit hours.

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.

Prerequisites: graduate standing and consent of instructor.

RHET 7360 - Internship/Practicum

Three credit hours.

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.

Prerequisites: graduate standing, recommendation of the departmental internship/practicum coordinator.

RHET 7361 - Editing Internship

Three credit hours.

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 consulta

Prerequisites: graduate standing, recommendation of the departmental editing track coordinator.

RHET 7370 - Theory of Computer-Mediated Communication

Three credit hours.

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.

Prerequisites: graduate standing.

RHET 7371 - Intro to Online Writing Instruction

Three credit hours.

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.

Prerequisites: 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

Three credit hours.

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.

Prerequisites: 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

Three credit hours.

May be repeated for credit when topic varies.

Prerequisites: This course provides theory and practice in topics related to online writing instruction, including accessibility in online writing instruction, advanced multimedia design, online writing assessment, collaboration, and administration in online writing programs.

RHET 7380 - Writing and Service Learning

Three credit hours.

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.

Prerequisites: graduate standing and permission of the instructor.

RHET 7390 - Thesis Proposal Seminar

Three credit hours.

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.

Prerequisites: consent of the graduate coordinator.

RHET 7391 - Thesis Hours

Three credit hours.

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.

Prerequisites: RHET 7390 and consent of instructor.

RHET 7395 - Cooperative Education

Three credit hours.

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.

Prerequisites: graduate standing and recommendation of the departmental cooperative education coordinator.

RHET 7399 - Writing Research Proposals and Reports

Three credit hours.

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.

Prerequisites: graduate standing.

Education

SCED 7104 - Curriculum Design Practicum

One credit hour.

A field placement centered around a technology-enriched environment. Preprofessional work with students in a facilitative learning environment that includes students with special needs. Inquiry and problem-based teaching strategies are observed. Preprofessional focus on technology in teaching and learning strategies and digital equity.

Prerequisites: TCED 7306.

Corequisites: SCED 7201.

SCED 7105 - Independent Study

One credit hour.

Offered on demand.

Prerequisites: consent of instructor.

SCED 7205 - Independent Study

Two credit hours.

Offered on demand.

Prerequisites: consent of instructor.

SCED 7301 - Secondary School Curriculum

Three credit hours.

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 7304 - Action Research Project

Three credit hours.

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).

Corequisites: TCED 7302. (Topic chosen with and approved by project advisor at least four weeks before registration.)

SCED 7305 - Independent Study

Three credit hours.

Offered on demand.

Prerequisites: consent of instructor.

Sociology

SOCI 5301 - Computer Use: Packaged Programs

Three credit hours.

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.

Prerequisites: SOCI 2381, 3385.

SOCI 5302 - Special Topics in Sociology

Three credit hours.

The special topics course will address themes which are timely and/or absent from the regular course catalog. These courses will apply a sociological lens to a variety of interesting issues. Taken together, the topics this course may cover will demonstrate the breadth of issues sociology may address and the relevance of the discipline to either current events or student interests.

Dual listed in undergraduate catalog with SOCI 5302

SOCI 5332 - Life, Death, and Data

Three credit hours.

This course is an advanced introduction to the social scientific study of population in the contemporary world. Major areas within sociology are integrated with the study of population dynamics, including child survival and mortality, family and households, social and economic inequality, gender, aging, urbanization, and international migration.

SOCI 5365 - Sociology of Organizations

Three credit hours.

Examination of a variety of complex organizations in modern society, including; schools, hospitals, corporations,

universities, and government. Organizational structures and processes are analyzed with emphasis on inter

organizational and organization-environment relations. The students will learn the meanings and significances of the statement "Ours is an organizational society." This course systematically introduces various sociological and organizational theories, concepts, and ideas as well as macro- and micro-sociological readings and case studies.

Dual listed in the undergraduate catalog with SOCI 4365

SOCI 5376 - Sociology of Health & Illness

Three credit hours.

A critical examination of how cultural, social-structural, and institutional forces shape our understanding and experience of health and illness. We will discuss several topics such as how gender, race/ethnicity, and socioeconomic status (SES) affect health outcomes. We will explore these topics using multidisciplinary and international perspectives.

Dual listed in the undergraduate catalog with SOCI 4376

SOCI 7375 - Program Evaluation

Three credit hours.

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.

Prerequisites: SOCI 3175, 3375.

SOCI 7390 - Independent Study

Three credit hours.

Consent will be based on intersection of faculty expertise and student/program need. Specialized instruction on sociological topic.

Prerequisites: Consent of Instructor.

Social Work

SOWK 5310 - Social Gerontology

Three credit hours.

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.

Prerequisites: graduate standing.

SOWK 5331 - Introduction to Animal Assisted Therapy

Three credit hours.

This elective will explore the role of companion animals for people of all ages and the importance of including consideration of the role of animals in the helping professions. The course will cover the human-animal bond, physical and emotional health benefits of companion animals, the role of animals in the development of children and families, the use and impact of Animal Assisted Activity/Therapy with a variety of populations, including older adults, and ways in which professionals can include animals in their disciplines as teachers, companions, and facilitators. The course will include observations of AAT visits to human service settings, both in the community and long-term care, as well as web-enhanced classes. Students with credit for SOWK/GERO 4331 cannot receive credit for SOWK/GERO 5331. Cross listed as Cross-listed as GERO 5331.

SOWK 5336 - Social Aspects of Death and Dying

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisite or Corequisite: SOWK 7330.

SOWK 7302 - Foundations of Social Work Practice II

Three credit hours.

Continuation of SOWK 7301. Study of strategies and techniques of intervention with individuals, families, groups, organizations, and communities; practice evaluation; and termination.

Prerequisites: SOWK 7301.

SOWK 7316 - Advanced Standing Seminar

Three credit hours.

Corequisite: SOWK 7603 and pre or corequisite SOWK 7370, SOWK 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.

Prerequisites: Advanced standing admission.

SOWK 7321 - Aging and Social Policy

Three credit hours.

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.

Prerequisites: graduate standing.

SOWK 7322 - Assessment and Care Management of the Older Adult

Three credit hours.

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.

Prerequisites: graduate standing.

SOWK 7323 - Impact of Illness and Disability

Three credit hours.

This course prepares professionals to work with those experiencing illness and disability across the life course, emphasizing strengths and resiliency. Ethical, as well as the bio-psycho-social-spiritual aspects of illness and disability in the individual, family and wider community are highlighted.

SOWK 7325 - Health and Biology of Aging

Three credit hours.

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.

Prerequisites: Graduate Standing.

SOWK 7327 - Grief, Loss, and Social Work Practice

Three credit hours.

Individuals, families, groups, and communities all experience loss. Losses may be developmental and expected, and some are traumatically unexpected. Losses come with life transitions, changing relationships, and, of course, death. Many clients with whom social workers will interact will need assistance understanding and adjusting to losses and grief reactions. Basic assessment and intervention skills for practice with client systems experiencing grief and loss will be emphasized.

Prerequisites: graduate standing.

SOWK 7330 - Human Behavior in the Social Environment I

Three credit hours.

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.

Prerequisites: program admission.

SOWK 7331 - Foundations of Social Work Practice III

Three credit hours.

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.

Prerequisites: SOWK 7330.

SOWK 7350 - Social Welfare Policies and Services

Three credit hours.

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.

Prerequisites: program admission.

SOWK 7370 - Social Work Research Methods

Three credit hours.

The study of social work research methodology, critical evaluation of published research, the values and ethics of research practice.

Prerequisites: program admission or special permission from instructor.

SOWK 7380 - Global Perspectives in Social Work

Three credit hours.

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. Engaging in critical thinking and analysis of social welfare issues, students will explore how political, economic, cultural, religious, historical, and environmental factors impact social welfare policies and the delivery of human services in different regions of the world, primarily North America, Africa, Asia, and the Middle East. Special emphasis will be given to the social issues created by HIV/AIDS, poverty, genocide, immigration, and war. By examining international models of social work practice, this course is also relevant to students who are working or having an interest in working with immigrant/refugee populations in the United States.

Prerequisites: graduate standing.

SOWK 7390 - Diversity and Oppression

Three credit hours.

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.

Prerequisites: program admission.

SOWK 7391 - Assessment and Differential Diagnosis

Three credit hours.

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.

Prerequisites: SOWK 7330.

SOWK 7392 - Special Topics in Clinical Social Work

Three credit hours.

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 7394 - Social Work Practice in Schools

Three credit hours.

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 7395 - Addictions Treatment

Three credit hours.

This course is intended to introduce the dynamic topic of addiction and its treatment. In this course, these topics will be investigated and discussed: the foundations and assessment of addiction, substances commonly abused, special populations (i.e. behavioral addictions, addictions in the workplace), and treatments for addictions.

SOWK 7396 - Crisis Problem Solving

Three credit hours.

This course is an advanced generalist practice course designed to teach practice skills and model techniques for assessment, initial intervention, and follow up with individuals, families, and groups/organizations. The emphasis is on expanding knowledge of theoretical concepts and evidence-based treatment strategies aimed at crisis situations. Students will learn initial safety assessment models as well as intervention techniques with children, families, and communities.

SOWK 7397 - Domestic Violence

Three credit hours.

This course will provide an overview of conceptual models of violence, current research, and social work practice issues used in addressing domestic violence (violence between intimates). While the primary focus will be on violence against women and the physical and sexual abuse of children, populations that are disproportionately affected by interpersonal violence, there will also be discussion of elder abuse, dating violence, interpersonal violence with LGBT populations, and prevention.

SOWK 7398 - Psychodynamic Psychotherapy

Three credit hours.

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 7403 - Social Work Internship I

Four credit hours.

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.

Prerequisite or Corequisite: SOWK 7301, SOWK 7330, SOWK 7350, SOWK 7390. (SOWK 7403 and SOWK 7404 must be completed consecutively, in the same agency setting).

SOWK 7404 - Social Work Internship II

Four credit hours.

Continuation of SOWK 7403; requires 240 clock hours of placement. Graded credit/no credit.

Prerequisites: SOWK 7403. Prerequisites or co-requisites: SOWK 7302, SOWK 7331, SOWK 7370, SOWK 7391. (SOWK 7403 and 7404 must be completed consecutively, in the same agency setting).

SOWK 7603 - Advanced Standing Social Work Internship

Six credit hours.

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.

Prerequisites: Advanced Standing admission. Pre or co- requisites: SOWK 7370, SOWK 7391, SOWK 7316 and SOWK 7316 co-requisites.

SOWK 7803 - Social Work Block Internship

Eight credit hours.

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.

Corequisites: SOWK 7301, SOWK 7302, SOWK 7330, SOWK 7331, SOWK 7350, SOWK 7370, SOWK 7390, SOWK 7391.

SOWK 8191 - Guided Study

One credit hour.

Directed individual study arranged by student.

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).

SOWK 8204 - Crisis Problem Solving

Two credit hours.

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.

Prerequisites: completion of the foundation year graduate program.

SOWK 8205 - Group Treatment

Two credit hours.

Group leadership to provide therapeutic intervention to members; leading groups with different needs, such as mental illness, antisocial behavior, addictions, neurosis, behavior changes.

Prerequisites: graduate standing.

SOWK 8206 - Psychodrama

Two credit hours.

Technique originated by J.L. Moreno; personality makeup, interpersonal relationships, emotional problems, decisions, conflicts are explored by dramatic enactment in a positive, supportive setting.

Prerequisites: completion of the foundation year graduate program.

SOWK 8207 - Child Behavior and Treatment

Two credit hours.

Psychosexual, social, cognitive, physical development of children; major diagnostic categories; treatment approaches reviewed, evaluated for appropriateness according to individual child, family environment needs.

Prerequisites: completion of the foundation year graduate program.

SOWK 8208 - Child Abuse and Treatment

Two credit hours.

Variables in child maltreatment; physical, psychological, emotional, social implications; social work methodologies; role of multidisciplinary teams.

Prerequisites: completion of the foundation year graduate program.

SOWK 8209 - Community Social Work

Two credit hours.

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.

Prerequisites: graduate standing.

SOWK 8211 - Social Work Practice with Older Adults

Two credit hours.

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.

Prerequisites: graduate standing.

SOWK 8213 - Supervision

Two credit hours.

Purpose, functions, processes; emphasis on beginning-level interactional skills.

Prerequisites: graduate standing.

SOWK 8218 - Grief, Loss, and Social Work Practice

Two credit hours.

Basic assessment and intervention skills for practice with client systems experiencing grief and loss.

Prerequisites: graduate standing.

SOWK 8230 - Evidence-based Social Work Practice in Adult Mental Health

Two credit hours.

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.

Prerequisites: graduate standing.

SOWK 8231 - Addictions Treatment

Two credit hours.

Dynamics of addiction, treatment; biological, social, societal aspects of addiction; implications for treating special populations.

Prerequisites: graduate standing.

SOWK 8234 - Personality Theory

Two credit hours.

Several frames of reference on personality theory; includes historical antecedents, major concepts, applicability to social work practice, limitations of various theories.

Prerequisites: graduate standing.

SOWK 8235 - Spirituality in Social Work

Two credit hours.

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.

Prerequisites: graduate standing.

SOWK 8236 - Human Sexuality and Social Work Practice

Two credit hours.

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.

Prerequisites: completion of the foundation year graduate program.

SOWK 8238 - Women & Family Issues in Social Work

Two credit hours.

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 8242 - Global Perspective in Social Work

Two credit hours.

Using film as the medium students will engage in critical thinking and analysis of social welfare issues, and explore how Political, economic, 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.

Prerequisites: 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.

SOWK 8242 - Global Perspective in Social Work

Two credit hours.

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, economic, 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.

Prerequisites: Graduate Standing.

SOWK 8251 - Juvenile Delinquency

Two credit hours.

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.

Prerequisites: graduate standing.

SOWK 8253 - Law and Social Work

Two credit hours.

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.

Prerequisites: graduate standing.

SOWK 8271 - Research Project

Two credit hours.

Steps in carrying out a research project; all phases of research methodology.

Prerequisites: SOWK 7370 and SOWK 8371 or consent of instructor.

SOWK 8292 - Guided Study

Two credit hours.

Directed individual study arranged by student.

Prerequisites: consent of instructor, approval of course outline by school's Curriculum Committee.

SOWK 8301 - Advanced Directed Practice I

Three credit hours.

Developing biopsychosocial framework for assessment, intervention; focus on careful assessment, diagnosis prior to clinical interventions.

Prerequisites: concentration year standing.

SOWK 8302 - Advanced Directed Practice II

Three credit hours.

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.

Prerequisites: SOWK 8301 or MFT-GC admission.

SOWK 8303 - Couples Treatment

Three credit hours.

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.

Prerequisites: Completion of the Foundation Year of the MSW or similar MA program and admission to the MFT certificate program.

SOWK 8305 - Management and Community Practice I

Three credit hours.

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.

Prerequisites: concentration year standing.

SOWK 8306 - Management and Community Practice II

Three credit hours.

Continuation of SOWK 8305; use of competing values framework (a meta-theoretical model) to integrate management skills of boundary-spanning, human relations, coordinating, directing.

Prerequisites: SOWK 8305.

SOWK 8308 - Ethical Issues in Couple and Family Therapy

Three credit hours.

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.

Prerequisites: admission to the MSW program or the MFT-GC program.

SOWK 8309 - Intergenerational Family Therapy

Three credit hours.

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.

Prerequisites: admission to the MSW program or the MFT-GC program.

SOWK 8310 - Sociology of the Family

Three credit hours.

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. Required for The course is Required for the Marriage and Family Certificate.

Prerequisites: admission to the MSW program or the MFT-GC program.

SOWK 8311 - Family Life Cycle

Three credit hours.

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.

Prerequisites: Graduate Standing.

SOWK 8312 - Play Therapy

Three credit hours.

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.

Prerequisites: Concentration year standing, MFT-GC, program or instructor permission.

SOWK 8320 - Family Mediation

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: graduate standing.

SOWK 8359 - Evaluation Research

Three credit hours.

This course is for students enrolled in the Management and Community Practice (MCP) concentration. This course builds on content presented in SOWK 7370 and applies it to macro-level practice and research in organizations and communities. The course emphasizes evaluation research design, data collection, and the political contexts of needs assessment and program evaluation.

Prerequisites: Prerequisite: SOWK 7370

SOWK 8360 - Data Analysis for MCP

Three credit hours.

This course is for students enrolled in the Management and Community Practice concentration. Students will learn a variety of exploratory, confirmatory, and prescriptive analysis techniques including but not limited to measures of central tendencies; bivariate and multivariate analysis procedures; exploratory data analyses; probability analyses; and inferential statistics. Students will apply these techniques to data collected in SOWK 8359 and use their understanding of them to critique articles in professional journals.

Prerequisites: Prerequisites: SOWK 7370 and SOWK 8359

Corequisites: Corequisites: SOWK 8507 or SOWK 8508

SOWK 8371 - Statistics for Social Work

Three credit hours.

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.

Prerequisites: SOWK 7370 or special permission from Instructor.

SOWK 8390 - Advanced Direct Practice III

Three credit hours.

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.

Prerequisites: SOWK 8301.

Corequisites: SOWK 8302

SOWK 8503 - Advanced Direct Practice Internship I

Five credit hours.

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.

Prerequisites: concentration year standing. Pre or corequisite: SOWK 8301. (SOWK 8503 and SOWK 8504 must be completed consecutively, in the same agency setting).

SOWK 8504 - Advanced Direct Practice Internship II

Five credit hours.

Continuation of Social Work SOWK 8503; focus on integrating knowledge in preparation for professional practice; requires 360 clock hours of placement. Graded credit/no credit.

Prerequisites: SOWK 8301, SOWK 8503. Pre or corequisite: SOWK 8302. (SOWK 8503 and 8504 must be completed consecutively, in the same agency setting).

SOWK 8507 - Internship I Management & Community Practice

Five credit hours.

Experience working in a social service agency in an administrative capacity; requires 360 clock hours of placement. Graded credit/no credit.

Prerequisites: concentration year standing. (SOWK 8507 and SOWK 8508 must be completed consecutively, in the same agency setting).

Corequisites: SOWK 8305

SOWK 8508 - Internship II Management & Community Practice

Five credit hours.

Continuation of SOWK 8507; focus on integrating knowledge, assuming responsibility for administrative functions, including planning, evaluation. Graded credit/no credit.

Prerequisites: SOWK 8305, SOWK 8507. (SOWK 8507 and 8508 must be completed consecutively and in the same agency setting).

Corequisites: SOWK 8306, SOWK 8159

Special Education

SPED 5202 - Workshop

Two credit hours.

Offered on demand.

SPED 5214 - Early Childhood Special Education Assessment Field Experience

Two credit hours.

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

Two credit hours.

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

Two credit hours.

Language development in normal-hearing, hearing-impaired children; relationships between the two populations; relationship of learning theory, cognitive and psychosocial-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 5302 - Workshop

Three credit hours.

Offered on demand.

SPED 5311 - Managing the Learning Environment B

Three credit hours.

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.

Prerequisites: graduate candidates entering with the graduate endorsement only option and must be admitted to the Graduate School.

SPED 5312 - Medical Problems in Child Development

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: PSYC 1300, an introductory human development course, or consent of the instructor.

SPED 5320 - Behavior Management

Three credit hours.

Theory, research, and application for behavior management. Current issues and research in applied behavioral analysis and other forms of classroom management; cognitive, verbal behavioral, and emerging management procedures; emphasis on application of research. An emphasis will be on Applied behavior analysis and methods to observe, track and evaluate programming for students with mild to severe learning or behavioral disabilities.

Dual listed with undergraduate level SPED 4320

SPED 5323 - Language Development and Disorders

Three credit hours.

This course focuses primarily on the acquisition of language by children, including the acquisition of phonology (the sound system of the language), semantics (the meaning of units in the language), syntax (the structure of sentences), morphology (the structure of words), and pragmatics (language use). The course will address the acquisition of human language, issues in language development and the effects of disability and/or trauma on the language and cognition. Although the major portion of the course will focus on the acquisition of English, course content will include language development for people of other cultures and languages. Content will additionally observe language development of other spoken and signed languages. Sessions will include lecture, demonstration, discussions, video, individual and group activities.

Dual listed with undergraduate level SPED 4323

SPED 5330 - Severe Disabilities

Three credit hours.

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.

Prerequisites: admission to the program; SPED 4301, EDFN 3320, READ 3320, READ 3322, TCED 3383.

SPED 5344 - Disability Law

Three credit hours.

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 American with Disabilities Act (ADA),

Dual listed with undergraduate level SPED 4344.

SPED 5360 - Psychological Aspects of Deafness

Three credit hours.

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

Three credit hours.

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.

Prerequisites: Interpreting 4320/INTR 5320 or consent of instructor. Corequisite: Special Education 4264, 4266.

SPED 7103 - Teaching Adolescents with Exceptionalities

One credit hour.

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

One credit hour.

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

One credit hour.

This is the second experience in a series of three supervised practical. 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.

Corequisites: SPED 7341.

SPED 7142 - ECSE Clinical II

One credit hour.

This is the third and final experience in a series of three supervised practical 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.

Corequisites: SPED 7342.

SPED 7144 - Collaboration in the Field

One credit hour.

This is the first experience in a series of three supervised practical 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.

Corequisites: SPED 7344.

SPED 7154 - Physical and Health Management

One credit hour.

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 - Supervised Practice

One credit hour.

Practical use of skills, competencies from courses; working under faculty supervision with individuals with disabilities being served in education and/or rehabilitation settings.

Prerequisites: consent of instructor.

SPED 7191 - Independent Study

One credit hour.

Offered on demand.

Prerequisites: consent of instructor.

SPED 7193 - Special Topics

One credit hour.

In-depth study of selected interest in a special education emphasis area. Offered on demand.

SPED 7203 - Adolescents with Exceptionalities

Two credit hours.

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

Two credit hours.

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 7290 - Supervised Practice

Two credit hours.

Practical use of skills, competencies from courses; working under faculty supervision with individuals with disabilities being served in education and/or rehabilitation settings.

Prerequisites: consent of instructor.

SPED 7291 - Independent Study

Two credit hours.

Offered on demand.

Prerequisites: consent of instructor.

SPED 7292 - Field Experience I

Two credit hours.

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.

Prerequisites: SPED 7305.

SPED 7293 - Special Topics

Two credit hours.

In-depth study of selected interest in a special education emphasis area. Offered on demand.

SPED 7295 - Field Experience II

Two credit hours.

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.

Prerequisites: Successful completion of SPED 7351 - Assessment and Instructional Design I and SPED 7292 - Field Experience I.

SPED 7296 - Field Experience III

Two credit hours.

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.

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.

SPED 7301 - Foundations of Special Education

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: Completion of core emphasis course work, graduate standing.

SPED 7333 - Characteristics and Educational Needs of Children with Severe Disabilities

Three credit hours.

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

Three credit hours.

Identification of intervention strategies; design of effective programs for teaching age-appropriate, functional living skills to individuals with severe disabilities.

Prerequisites: Special Education 7335 or consent of instructor.

SPED 7339 - Vocational Instruction for Persons with Handicaps

Three credit hours.

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 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.

Prerequisites: exceptionality course.

SPED 7351 - Assessment and Instructional Design I

Three credit hours.

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.

Prerequisites: SPED 7305 and should be taken in conjunction with SPED 7295.

SPED 7352 - Assessment and Instructional Design II

Three credit hours.

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.

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.

SPED 7353 - Transition and Life Adjustment

Three credit hours.

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

Prerequisites: SPED 7352 - Assessment and Instructional Design II.

SPED 7360 - Characteristics and Educational Needs of the Severely Emotionally Disturbed

Three credit hours.

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

Three credit hours.

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.

Prerequisites: SPED 7360 or consent of instructor.

SPED 7362 - Direct Teaching of Social Skills in Children and Youth

Three credit hours.

(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

Three credit hours.

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.

Prerequisites: graduate standing.

SPED 7366 - Exceptionalities in the Classroom

Three credit hours.

Recognition of exceptionalities, educational implications; techniques for elementary teacher in identifying exceptionalities in regular classroom. Offered on demand.

Prerequisites: graduate standing.

SPED 7390 - Special Education Internship

Three credit hours.

This course is the initial course in the graduate program in special education. The course will serve dual purposes in graduate study. It will be an introductory course in special education for all candidates in the program. Additionally, it will serve as the required initial course for candidates in the initial/non-traditional program in special education. The courses will be an intensive hybrid course that includes field components that address the seven competencies required of special education service providers in public schools. Candidates will learn specific competencies through intensive competency and content driven modules and apply the content in specific activities in a special education setting with mentor/university supervisor oversight.

SPED 7390 - Supervised Practice

Three credit hours.

Practical use of skills, competencies from courses; working under faculty supervision with individuals with disabilities being served in education and/or rehabilitation settings.

Prerequisites: consent of instructor.

SPED 7391 - Independent Study

Three credit hours.

Offered on demand.

Prerequisites: consent of instructor.

SPED 7393 - Special Topics

Three credit hours.

In-depth study of selected interest in a special education emphasis area. Offered on demand.

Statistics

STAT 7340 - Advanced Statistical Methods I

Three credit hours.

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.

Prerequisites: A grade of C or greater in MATH 1451 and STAT 3352 or equivalent.

STAT 7341 - Advanced Statistical Methods II

Three credit hours.

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, nonparametric methods, categorical data analysis, Bayesian decision theory and methods, and the use of computer packages.

Prerequisites: A grade of B or greater in STAT 7340.

STAT 7342 - Introduction to SAS

Three credit hours.

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 hypothesize 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

Three credit hours.

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.

Prerequisites: A grade of B or greater in STAT 7342.

STAT 7395 - Assessment II Practicum

Three credit hours.

Candidates will utilize various formal and informal assessments and analyze them for their utility in the pre-referral, referral, evaluation, and IEP development process. Candidates will observe learning behavior, systematically design and implement strategies to address learning concerns, develop and/or administer informal assessments, monitor effects and report outcomes. By the conclusion, students should be writing, implementing, and evaluating instructional programs and conducting individual and small group instruction. This phase requires students to create and implement instructional programs and to demonstrate appropriate educational decision-making using evidence-based best practices. The time committed to a three credit-hour practicum is 120 clock hours in instructional settings plus participation in weekly/bimonthly discussion sessions. Candidates are required to take this course concurrently with SPED 7352.

Systems Engineering

SYEN 5182 - MEMS and Microsystems Laboratory

Two hours laboratory per week. One credit hour.

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.

Prerequisites: SYEN 4376 and 4176, or consent of instructor.

SYEN 5199 - Special Topics

One, two, three, or four hours lecture. One credit hour.

Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability.

Prerequisites: Consent of the instructor.

SYEN 5282 - Microelectromechanical Systems MEMS and Microsystems

Three hours lecture. Two credit hours.

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. 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.

Prerequisites: SYEN 3372 or equivalent and corequisite concurrent SYEN 5182 or equivalent with a grade of C or better.

SYEN 5299 - Special Topics

One, two, three, or four hours lecture. Two credit hours.

Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability.

Prerequisites: Consent of the instructor.

SYEN 5300 - Independent Study

Three credit hours.

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.

Prerequisites: Graduate standing, and consent of the instructor.

SYEN 5308 - Linux Systems Programming

Three credit hours.

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.

Prerequisites: CPSC 2376 or equivalent.

SYEN 5310 - Introduction to Signal Processing

Three hours lecture. Three credit hours.

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.

Prerequisites: MATH 3322 or equivalent.

SYEN 5314 - Queuing Theory and Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3314 or equivalent.

SYEN 5315 - Dynamics II

Three hours lecture. Three credit hours.

Kinematics of translating and rotating vectors. Dynamics of systems of particles and rigid bodies. Angular momentum. Newtonian mechanics. Lagrangian mechanics. Examples drawn from the fields of robotics, biological motion, and planetary motion. Three hours lecture. Three credit hours. Dual Listed as 4315 in Undergraduate Catalog.

Prerequisites: SYEN 3371

SYEN 5320 - Linear Systems Theory

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3364 or consent of instructor.

SYEN 5322 - Modeling Transportation Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3312, SYEN 3314, or Consent of Instructor.

SYEN 5325 - Fuzzy Logic Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3364.

SYEN 5326 - Measurement Techniques

Two hours lecture. Two hours laboratory per week. Three credit hours.

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. Dual listed with 4326 in Undergraduate Catalog.

Prerequisites: SYEN 3373 or equivalent and SYEN 3374 or equivalent.

SYEN 5327 - Acoustics I

Three credit hours.

Development of the equations for acoustics. Transducers for measurement of sound. The ear as a transducer and standard units for sound, for instance, sound pressure level). Analog and digital processing of signals, including spectral analysis and adaptive signal processing. Simple sources, resonators, and reflection. Applications to noise analysis and

control and machinery diagnosis through sound. Three credit hours. Dual Listed as 4327 in Undergraduate Catalog.

Prerequisites: SYEN 3374 or equivalent.

SYEN 5329 - Robust and Optimal Control

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3364, MATH 3312.

SYEN 5331 - Advanced Computer Architecture

Three hours lecture. Three credit hours.

Introduction to Computer Systems, Instruction- Set architecture, Arithmetic/Logic Unit, Data Path and Control, Memory System Design, I/O Interface, and Advanced Architectures.

Prerequisites: SYEN 3336 or consent of instructor.

SYEN 5332 - Applied Operating Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3362.

SYEN 5334 - Software Systems Engineering

Three hours lecture. Three credit hours.

Students are required to do a project related to course contents, Not open to students with credit for SYEN 4334. Dual listed in the Undergraduate Catalog as SYEN 4334.

Prerequisites: 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.

SYEN 5335 - Mechatronics I

Three hours lecture. Three credit hours.

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 petentiometers, 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.

Prerequisites: MATH 2453 or equivalent, PHYS 2321 or equivalent.

SYEN 5336 - Advances in Communication Networks

Three hours lecture. Three credit hours.

Essentials of B-ISDN, InteServ, MPLS, DiffServ. Advances in optical networks, wireless networks, satellite networks, sensor networks, ad hoc networks, access networks, and autonomous networks. FSO technology. VoIP and video-over-IP. Modeling and optimization of networks. Communication switch OS. Elementary queuing theory. Security issues. OPNET training. Socket programming.

Prerequisites: SYEN 3312, 3316, and 3332.

SYEN 5340 - Applied Numerical Methods

Three hours lecture. Three credit hours.

Scientific computing, error analysis, roots of equations, systems of equations, curve fitting, numerical differentiation and integration, ordinary and partial differential equations. Students are required to do a term project related to the contents of the course. Course not open to students with credit for SYEN 4340. Dual listed in the Undergraduate Catalog as SYEN 4340.

Prerequisites: SYEN 1305; MATH 3312 and 3322.

SYEN 5342 - Linear Programming and Network Flows

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3312, or consent of instructor.

SYEN 5350 - Digital Signal Processing

Three credit hours.

Signals and signal processing; discrete-time signals and systems in the time and frequency domains; digital processing of continuous-time signals; discrete-time signals and systems in the domain; LTI discrete-time systems in the transform domain; digital filter structures; IIR digital filter design; FIR digital filter design; DFT and FFT processing; DSP algorithm implementation; and applications of DSP. Students with credit for SYEN 4350 cannot take SYEN 5350 for credit.

SYEN 5352 - Spatial Time Series

Three hours lecture. Three credit hours.

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 timeseries 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.

Prerequisites: SYEN 3312 or equivalent, STAT 3353 or equivalent, or Consent of Instructor.

SYEN 5353 - Advanced Digital Communications

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3354 or consent of the instructor.

SYEN 5354 - Power Systems Analysis

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3358, or consent of the instructor.

SYEN 5355 - Mobile Multimedia Internet

Students with credit for SYEN 4355 may not take SYEN 5355. Three credit hours.

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 Undergraduate Catalog as SYEN 5355. Three hours lecture.

Prerequisites: SYEN 3314, or consent of the instructor.

SYEN 5356 - Radio Frequency Techniques and Systems

Three hours lecture. Three credit hours.

Analysis of electrostatic, magnetostatics, and dynamic fields using vector analysis. Coulomb's Law, electric field intensity, electric flux density, Gauss' Law. Energy and potential. Conductors, dielectrics, and capacitance. Poisson's and Laplace's equations. The steady magnetic field magnetic forces, materials, and inductance. Time varying fields and Maxwell's equations. Boundary conditions. The uniform plane waves. Plane waves at boundaries and in dispersive media. Transmission lines and antenna fundamentals. Examples are taken from the field of wireless communications.

Prerequisites: SYEN 2315, MATH 3322, and PHYS 2322.

SYEN 5358 - Cellular and Wireless Communications

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3354.

SYEN 5359 - Optical Networking

Three hours lecture. Three credit hours.

Fundamental concepts of networking, optical networks elements and devices, SONET, WDM, DWDM, optical control plane, MPLS and GMPLS, Free Space Optical Mesh Networks.

Prerequisites: SYEN 4355, or consent of the instructor.

SYEN 5362 - Neural Networks and Adaptive Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3312, or consent of the instructor.

SYEN 5366 - Advanced Digital Systems

Three credit hours.

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.

Prerequisites: SYEN 3330 and SYEN 3310.

SYEN 5371 - Thermodynamics II

Three credit hours.

Using a first principles approach, the fundamental conservation levs of energy, entropy, and enthalpy will be covered, including irreversibility. Application to thermal systems. Introduction to chemical thermodynamics, including reacting flows and combustion. Three hours lecture. Three credit hours. Dual listed as 4371 in Undergraduate catalog.

Prerequisites: SYEN 3378 or equivalent.

SYEN 5372 - Mechatronics II

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 4335 or equivalent.

SYEN 5374 - Fluid Mechanics II

three hours lecture. three credit hours.

Prerequisite: SYEN 3374 or consent of instructor. The important features of compressible flows of ideal gas will be discussed with particular attention on the role of Mach number and speed of sound in the analysis. Characteristics of isentropic and non-isentropic flows including normal shock waves will be investigated. Turbomachines such as pumps, fans, compressors, and turbines will be introduced. The angular momentum equation will be used to analyze performance characteristics of these turbomachines. If taken at the 4000 level cannot be taken at the 5000 level.

Prerequisites: Prerequisite: SYEN 3374 or consent of instructor.

SYEN 5375 - Mechanical Vibrations

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3370, or consent of the instructor.

SYEN 5381 - Thermal and Fluid System Design

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 4379 or consent of the instructor.

SYEN 5383 - Finite Element Analysis

Three hours lecture. Three credit hours.

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 as SYEN 5383

Prerequisites: SYEN 3378, 4376, and 4340 (recommended).

SYEN 5384 - Computer Methods in Fluids and Heat Transfer

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 4374 or equivalent.

SYEN 5389 - Professional Engineering Licensure

Two hours lecture. Three hours laboratory per week. Three credit hours.

Legal, regulatory, and ethical issues related to the practice of engineering; preparation for engineering licensure examinations. Students cannot receive graduate credit for SYEN 5389 if they have previously taken SYEN 4389. Dual listed in the Undergraduate Catalog as CNMG 4389. Cross listed as CNMG 5389.

Prerequisite concurrent: Registration for the Fundamentals of Engineering exam, or consent of instructor.

SYEN 5399 - Special Topics

One, two, three, or four hours lecture. Three credit hours.

Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability.

Prerequisites: Consent of the instructor.

SYEN 5499 - Special Topics

One, two, three, or four hours lecture. Four credit hours.

Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability.

Prerequisites: Consent of the instructor.

SYEN 7101 - Research Methodology

One credit hour.

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.

Prerequisites: Graduate standing.

SYEN 7102 - Research Tools

One credit hour.

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.

Prerequisites: Graduate standing.

SYEN 7103 - Research Applications

One credit hour.

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.

Prerequisites: Graduate standing.

SYEN 7118 - Research Ethics in Science and Engineering

One credit hour.

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

1 credit hours.

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. Offered on demand. Cross listed as between Computer Science, Systems Engineering, and Information Science.

SYEN 7190 - Systems Engineering Seminar

One credit hour.

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.

Prerequisites: Graduate standing and consent of the graduate advisor.

SYEN 7192 - Graduate Seminar

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.

Prerequisites: Graduate standing, consent of graduate coordinator.

SYEN 7300 - Independent Study

Three credit hours.

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.

Prerequisites: Completion of core course requirements in the graduate program, and consent of the instructor.

SYEN 7302 - Advanced Electronics for Instrumentation

Three credit hours.

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

Three credit hours.

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

Three credit hours.

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.

Prerequisites: SYEN 4371 or equivalent.

SYEN 7310 - Economic Evaluation of Engineering Projects

Three hours lecture. Three credit hours.

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.

Prerequisites: Math 1453, SYEN 3312 and 3314 or their equivalents, or consent of the instructor.

SYEN 7311 - System Design and Analysis

Three hours lecture. Three credit hours.

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.

Prerequisites: Graduate standing or consent of the instructor.

SYEN 7312 - Systems Architecture and Design

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 7311 or consent of the instructor.

SYEN 7313 - Systems Management and Evaluation

Three hours lecture. Three credit hours.

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.

Prerequisites: Graduate standing and consent of the instructor.

SYEN 7314 - Multi-criteria Decision and Risk Analysis

Three credit hours.

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 Multicriteria- optimization computer-software.

Prerequisites: SYEN 7313 or equivalent, or consent of the instructor.

SYEN 7315 - Complex Engineered Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3312 and 3362 or their equivalents, or consent of the instructor.

SYEN 7316 - Advanced Systems Simulation

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3312 and 3316 or equivalent, or consent of the instructor.

SYEN 7317 - Nano structural Materials: Physical and Chemical Properties

Three credit hours.

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.

Prerequisites: SYEN 3372 or PHYS 4340 or CHEM 4340 or equivalent.

SYEN 7318 - Micro- and Nano-Fabrication

Three credit hours.

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 Nano springs 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.

Prerequisites: Consent of instructor.

SYEN 7320 - Linear Systems Theory

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 5320 or consent of instructor.

SYEN 7331 - Transducers and Real Time Control

Three credit hours.

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.

Prerequisites: SYEN 4335 or equivalent, SYEN 7302, SYEN 1302 or equivalent.

SYEN 7332 - Advanced Operating Systems Design

Three hours lecture. Three credit hours.

Design principles of modern schedulers, multiprocessor 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.

Prerequisites: SYEN 5332 or consent of instructor.

SYEN 7342 - Network and Combinatorial Optimization

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 5342 or consent of the instructor.

SYEN 7355 - Statistical Signal Processing

Three hours lecture. Three credit hours.

The main coding theory problem. Introduction to finite fields. Vector space over finite fields. Structures of linear block codes. Encoding and decoding of linear codes. Dual codes. Non-binary Hamming codes. Perfect codes. Reed-Muller codes. Cyclic codes. Weight enumerators. Low density parity check codes. Convolutional codes.

Prerequisites: Math 3312 and SYEN 3354, or consent of the instructor.

SYEN 7357 - Advanced Antennas for Wireless Systems

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 3356 or consent of the instructor.

SYEN 7374 - Elasticity

Three hours lecture. Three credit hours.

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,

Prerequisites: SYEN 4376 or ASCI 5320 or consent of the instructor.

SYEN 7376 - Fracture Mechanics

Three hours lecture. Three credit hours.

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.

Prerequisites: SYEN 7374, or consent of the instructor.

SYEN 7385 - Systems Engineering Graduate Project

Three credit hours.

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.

Prerequisites: Graduate standing and consent of the student's graduate advisor.

SYEN 7399 - Special Topics in Systems Engineering

Three hours lecture. Three credit hours.

Advanced topics in the area of Systems Analysis and Applications/ Electrical and Computer Engineering/Telecommunication and Signal Processing/ Mechanical Engineering.

Prerequisites: Graduate standing and consent of the instructor.

SYEN 8100 - Systems Engineering Master's Thesis

One credit hour.

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.

Prerequisites: Graduate standing and consent of the thesis advisor.

SYEN 8200 - Systems Engineering Master's Thesis

Two credit hours.

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.

Prerequisites: Graduate standing and consent of the thesis advisor.

SYEN 8300 - Systems Engineering Master's Thesis

Three credit hours.

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.

Prerequisites: Graduate standing and consent of the thesis advisor.

SYEN 8400 - Systems Engineering Master's Thesis

Four credit hours.

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.

Prerequisites: Graduate standing and consent of the thesis advisor.

SYEN 8500 - Systems Engineering Master's Thesis

Five credit hours.

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.

Prerequisites: Graduate standing and consent of the thesis advisor.

SYEN 8600 - Systems Engineering Master's Thesis

Six credit hours.

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.

Prerequisites: Graduate standing and consent of the thesis advisor.

SYEN 9100 - Doctoral Research/Dissertation

One credit hour.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9200 - Doctoral Research/Dissertation

Two credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9300 - Doctoral Research/Dissertation

Three credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9400 - Doctoral Research/Dissertation

Four credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9500 - Doctoral Research/Dissertation

Five credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9600 - Doctoral Research/Dissertation

Six credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9700 - Doctoral Research/Dissertation

Seven credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9800 - Doctoral Research/Dissertation

Eight credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

SYEN 9900 - Doctoral Research/Dissertation

Nine credit hours.

Cross listed between Computer Science, Systems Engineering, and Information Science.

Prerequisites: Consent of Advisor.

Teacher Education

TCED 5100 - Workshop

One credit hour.

Exploration of areas of interest, preparation of educational materials. Offered on demand

Prerequisites: consent of instructor.

TCED 5200 - Workshop

Two credit hours.

Exploration of areas of interest, preparation of educational materials. Offered on demand

Prerequisites: consent of instructor.

TCED 5300 - Workshop

Three credit hours.

Exploration of areas of interest, preparation of educational materials. Offered on demand

Prerequisites: consent of instructor.

TCED 5321 - Teaching Diverse Learners

Three credit hours.

This course provides knowledge of educational psychology, special education, and diversity and incorporates technology for learning and teaching. Course assignments require students to observe classes in a variety of school settings with diverse populations and complete a case study. Includes a field component of 15 hours of classroom observation under the supervision of a cooperating teacher. Students with credit for TCED 4321 cannot take this course for credit.

Prerequisites: TCED 5383.

TCED 5330 - Classroom Management

Three credit hours.

Emphasizes creation of and fostering of classroom management techniques and strategies for the design of environments that are conducive to a safe place for teaching and learning. Includes connecting the school-home-community connections. Incorporates technology for learning and teaching. Candidates will have taken or passed Praxis CORE prior to course. Students with credit for TCED 4330 cannot take this course for credit.

TCED 5383 - Instructional Skills

Three credit hours.

This course provides knowledge of instructional skills, assessment, and disciplinary literacy. Lesson planning and design, evaluation, equity, legal issues, technology implementation, and content area literacy strategies will be addressed. Includes a field component of 15 hours individualized or small group instruction/support in a K-12 classroom setting under the supervision of a cooperating teacher. Students with credit for TCED 4383 may take TCED 5383 for credit.

TCED 7103 - Supervised Clinical Teaching

One credit hour.

Application of teaching skills and methods in area schools with special attention to adapting state curricula, teaching plans, and methods to multicultural and inclusive classes. Requires at least 30 clock hours in schools.

Corequisites: TCED 7202.

TCED 7106 - Instructional Skills Practicum

One credit hour.

Observing and assisting Master teachers and testing candidate's knowledge and selected skills of instruction, and management in metropolitan, multicultural secondary school classrooms.

Corequisites: TCED 7306.

TCED 7149 - Independent Study

One credit hour.

Individual problems in student's chosen field. Up to three hours may count toward degree. Offered on demand.

Prerequisites: consent of instructor.

TCED 7201 - Curriculum Design Seminar

Two credit hours.

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.

Prerequisites: SCED 7306.

Corequisites: SCED 7104

TCED 7202 - Specialized Instructional Methods

Two credit hours.

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.

Corequisites: TCED 7103.

TCED 7249 - Independent Study

Two credit hours.

Individual problems in student's chosen field. Up to three hours may count toward degree. Offered on demand.

Prerequisites: consent of instructor.

TCED 7301 - Curriculum, Pedagogy, and Practice

Three credit hours.

The course focuses on understanding curriculum concepts. It examines the philosophical basis, pedagogical practices, and theories of curriculum. It explores the relationships between curriculum, teachers, learners, instruction, and policy. Candidates analyze their own positions and practices and consider reasons for modifying them based on the learned knowledge and understanding of curriculum.

TCED 7302 - Trends and Issues in Education Seminar

Three credit hours.

A study of trends and issues pertaining to the goals, analysis of the teacher's role in dealing with current concerns in these areas.

Corequisites: TCED 7201 or TCED 7303.

TCED 7303 - Reflective Teaching

Three credit hours.

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

Three credit hours.

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 7306 - Instructional Skills and Classroom Management

Three credit hours.

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.

Corequisites: TCED 7106.

TCED 7321 - Teaching Culturally Different Children

Three credit hours.

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

Three credit hours.

(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

Three credit hours.

This course prepares teachers to work as mentors/coaches of pre-service and/or in-service teachers and as leaders in professional development.

TCED 7335 - Classroom Communication and Diversity

Three credit hours.

This course provides an introduction to the field of classroom communication in diverse settings sometimes known as classroom discourse. It examines the concept of discourse grounded in current research in the fields of sociolinguistics and semantics. It explores teaching understood as a study in interaction thereby making classroom discourse the language of teaching and learning.

TCED 7337 - Life Adjustment for Persons with Severe Disabilities

Three credit hours.

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

Three credit hours.

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 7349 - Independent Study

Three credit hours.

Individual problems in student's chosen field. Up to three hours may count toward degree. Offered on demand.

Prerequisites: consent of instructor.

TCED 7600 - Science, Mathematics, and Reading: An Interdisciplinary Approach K-4

Six credit hours.

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.

Prerequisites: consent of instructor.

TCED 7601 - Internship

Six credit hours.

Students spend a full semester in a school, under supervision of a secondary cooperating teacher or mentor and a University supervisor, observing, teaching, participating in activities involving the school, community.

Prerequisites: 21 hours completed in the program, including TCED 7201, and passing scores on Praxis II Content.

Corequisites: TCED 7302.

TCED 8150 - Specialist Thesis

One credit hour.

Preparation of the specialist thesis. Offered on demand.

TCED 8250 - Specialist Thesis

Two credit hours.

Preparation of the specialist thesis. Offered on demand.

TCED 8300 - Thesis

Three credit hours.

Preparation of master's thesis. Offered on demand.

Prerequisites: 24 graduate hours.

TCED 8301 - Curriculum Design and Evaluation

Three credit hours.

Historical, current curriculum design models; needs assessment, process, product evaluation of curriculum development. Offered in fall.

TCED 8310 - Professional Experience

Three credit hours.

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.

TCED 8350 - Specialist Thesis

Three credit hours.

Preparation of the specialist thesis. Offered on demand.

TCED 8450 - Specialist Thesis

Four credit hours.

Preparation of the specialist thesis. Offered on demand.

TCED 8550 - Specialist Thesis

Five credit hours.

Preparation of the specialist thesis. Offered on demand.

TCED 8600 - Thesis

Six credit hours.

Preparation of master's thesis. Offered on demand.

Prerequisites: 24 graduate hours.

TCED 8650 - Specialist Thesis

Six credit hours.

Preparation of the specialist thesis. Offered on demand.

Teaching Students who are Deaf or Hard of Hearing

TDHH 5301 - Foundations of Education for Deaf and Hard of Hearing Students

Three credit hours.

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.

Theatre

THEA 5140 - Special Topics in Theatre Arts

One credit hour.

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.

THEA 5240 - Special Topics in Theatre Arts

Two credit hours.

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.

THEA 5340 - Special Topics in Theatre Arts

Three credit hours.

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.

Technology Innovation

TINV 5301 - Strategies for Innovation

Three credit hours.

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.

Prerequisites: Junior or senior standing (TINV 4301) or graduate standing (TINV 5301).

TINV 5303 - Applied Innovation Project

Three credit hours.

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.

Prerequisites: TINV 4301/TINV 5301, MGMT 4361/5361 and MGMT 4383/MGMT 5383.

Catalog Addendum

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.

John Crawford '65
Danyell Crutchfield Cummings '97 '98
Stan Dimitrov '06 '10
Mauri Douglass '74 '86
David Garner '94
Holly Heer '00
David Hendrix, Jr. '09 '11
Doug Homeyer '93
Stasia Burk McDonald '93 '96
Jennifer Owens '97 '00
Katrina Owoh '02
Gina Pharis '87
Cassandra Ramey '13
Don Riggin '62
Nancy A. Secen '01
Jason Stormoe '99
Angela E. Thomas '04 '11
Rebecca Ward '79
Troy Wells '97
Helaine R. Williams '00

OFFICE OF THE CHANCELLOR

Andrew Rogerson, Chancellor
Joni Lee, Vice Chancellor for University Affairs

OFFICE OF DEVELOPMENT

Christian O'Neal, Vice Chancellor for University Advancement
Andrea Angel, Associate Vice Chancellor for Alumni and Development
Judy Williams, Associate Vice Chancellor of Communications and Marketing

OFFICE OF EXECUTIVE VICE CHANCELLOR AND PROVOST

Velmer Burton Jr, Executive Vice Chancellor and Provost
Christina Drale, Associate Vice Chancellor for Faculty Relations and Administration
Daryl Rice, Associate Vice Chancellor for Academic Affairs
Erin S. Finzer, Associate Vice Chancellor for Academic Affairs
Abhijit Bhattacharyya, Interim Vice Provost for Research and Dean of Graduate School
Deborah Baldwin, Associate Provost for UA Little Rock Collections and Archives
Sarah Beth Estes, Associate Provost of Community, Careers, and Extended Education
Simon Hawkins, Director of UA Little Rock's Honors College
Lisa Davis, Director of Distributed Learning
Cody Decker, Associate Provost and Chief Data Officer

DIVISION OF STUDENT AFFAIRS

Mark Allen Poisel, Vice Chancellor for Student Affairs
Amber Smith, Assistant Vice Chancellor for Student Experiences
Sharon Downs, Assistant Vice Chancellor, Wellness and Inclusion Associate Vice Chancellor, Enrollment Planning (Vacant)
Carlia Smith, Director of Financial Aid
Katie Young, Director of Admissions
Tugrul Polat, Director of International Student Services
Kathy Oliverio, Director of Military Student Success.

OFFICE OF FINANCE AND ADMINISTRATION

Steve McClellan, Vice Chancellor for Finance and Administration
Darrell R. Morrison, Associate Vice Chancellor for Finance
David Millay, Associate Vice Chancellor for Facilities Management
Charles Azebeokhai, Director of Human Resources
Allen Stanley, Director of Contracts and Auxiliary Services
Regina Wade-Carter, Director of Public Safety/Chief of Police
Thomas Bunton, Interim Associate Vice Chancellor for Information Technology Services/Chief Information Officer

A.B., Index of Faculty

The following is an alphabetical listing of our faculty. (Note: Faculty members, if your information is incorrect or not listed, please fill out the form at the bottom for correction.)

◊ signifies graduate faculty standing.

Adams, Alois J. ◊
Associate Professor of Physics

Ph.D., University of Dallas
Ph.D., University of Florida

Agarwal, Nitin ◊
Associate Professor of Information Science
B.Tech., Indian Institute of Information Technology
Ph.D., Arizona State University

Akhnoukh, Amin K.
Associate Professor of Civil and Construction Engineering
B.S., Cairo University M.S., Kansas State University
Ph.D., University of Nebraska-Lincoln

Allen, Ferris W. S.
Assistant Professor of Voice
B.Mus., Oberlin College M.Mus., The Juilliard School D.Mus., Indiana University

Al-Rizzo, Hussain M. ◊
Associate Professor of Systems Engineering
BSc, MSc, Mosul University
Ph.D., University of New Brunswick.A.B.

Al-Shukri, Haydar J. ◊
Professor of Applied Science Chairperson, Department of Applied Science
B.Sc., M.Sc., Baghdad University
Ph.D., St. Louis University

Ali, Nawab
Professor of Biology
B.Sc., M.Sc., M. Phil., Ph.D., Aligarh Muslism University

Amlani, Amyn
Chairperson of Audiology & Speech Pathology
Ph.D., Audiology, Michigan State University

Amrhein, Laura M. ◊
Associate Professor of Art History
B.A., James Madison University
Ph.D., Virginia Commonwealth University

Anderson, Charles M. ◊
Professor of Rhetoric and Writing
B.A., Texas Lutheran College
MACT, University of Tennessee
Ph.D., University of Iowa

Anderson, Gary T. ◊
Professor of Applied Science
BSEE, Rice University M.S.,
Ph.D., University of Texas at Austin

Anderson, Joel E. ◊
Professor of Political Science Chancellor
B.A., Harding College
M.A., American University
Ph.D., University of Michigan

Angel, Amy
BSW Coordinator
Licensed Certified Social Worker C-1127, State of Arkansas
Masters of Social Work, Grambling State University
BA Communications, Louisiana Tech University

Anson, Edward M. ◊
Professor of History
B.A., Drake University
Ph.D., University of Virginia

Atcherson, Samuel ◊
Associate Professor of Audiology
B.S.Ed., University of Georgia
M.Ed., University of Georgia
Ph.D., University of Memphis

Bacot, Hunter ◊
Professor of Public Administration
B.A., University of North Carolina
M.P.A., University of North Carolina at Charlotte
Ph.D.,University of Tennessee

Bain, Ann B. ◊
Professor of Nursing/Dean, College of Education and Health Professions
B.S.N., M.S.N., University of Central Arkansas
Ed.D., University of Arkansas at Little Rock

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Associate Professor of Management
Ph.D., Operations Management, The University of Alabama
M.B.A, Lahore University of Management Sciences, Pakistan
B.S, University of Engineering & Technology, Lahore, Pakistan

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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

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B.A., Western New Mexico University
M.S., Ph.D., New Mexico State University

Bandre, Patricia E. ◊
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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 ◊
Professor of Educational Leadership
B.A., Emory University
M.B.A., Georgia State University
M.A., Ph.D., University of Michigan

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Assistant Professor of English
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

Bell, Joseph R. ◊
Professor of Management
B.A., Bloomburg University
MB.A., Michigan State University
JD, T. M. Cooley Law School

Beavers, Melvin
Instructor of Rhetoric Writing
M.A., University of Arkansas at Little Rock

Berleant, Daniel ◊
Professor of Information Science

B.S., Massachusetts Institute of Technology
M.S., Ph.D., University of Texas at Austin

Berry, Brian ◊
Assistant Professor of Organic Chemistry
B.S., M.S., Ph.D., University of Arkansas at Little Rock

Bhai, Moiz
Assistant Professor of Economics
Ph.D. in Economics, University of Illinois at Chicago
M.A. in Economics, University of Illinois at Chicago
B.A. in Economics (with distinction), Political Science, Minor in Psychology, University of Illinois at Chicago

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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

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Professor of Construction Management
B.S.C.E., Texas A & M University
M.S.C.E., Southern Methodist University
Ph.D., University of Arizona

Blackmon, Larry
Laboratory Specialist and Lecturer of Construction Management and Civil and Construction Engineering
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Blanton, Miles ◊
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Professor of Psychology
B.A., Ph.D., University of Texas

Boateng, Kwasi◊
Associate Professor of Mass Communication
M.A., Ph.D., Ohio University

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Ph.D., Justice Studies, Arizona State University

Boss, Alan
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B.S., Brigham Young University
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Ph.D., University of Maryland

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B.M., Manhattan School of Music
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Ph.D., Washington State University

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Ph.D., University of Kansas

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M.A., Ph.D., University of California-Irvine

Duyar, Ibrahim ◊
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M.A., Texas Woman's University

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Ph.D., University of California, Berkeley

Edwards, Timothy ◊
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Arkansas State University
Ph.D., University of Kentucky

Edwards, Vickie L. ◊
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B.A., University of South Alabama
M.P.A., Georgia College and State University
Ph.D., University of Georgia

Elder, Erick M. ◊
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B.A., Allegheny College
M.A., Ph.D., Universit of Pittsburgh

Elsalloukh, Hassan ◊
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B.S., Henderson State University
M.S., University of Arkansas at Little Rock
Ph.D., Baylor University

Estes, Sarah Beth ◊
Associate Dean, College of Arts, Humanities, and Social Sciences Associate Professor of Sociology/Anthropology
B.A., Hendrix College
M.A., Ph.D., University of Iowa

Evans, Jane D.
Assistant Professor of Nursing RN to BSN Program Coordinator
PhD, University of Arkansas for Medical Science
MHA, Webster University
BSN, Harding University
ASN, University of Arkansas at Little Rock

Ewing, Rosella L.
Assistant Professor of Voice and Opera
B.A., The University of the South, Sewanee, Tennessee
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Index of Faculty Emeriti

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