About the Catalog
Copies of the UALR 2006-2007 Undergraduate Catalog are available in the Office of Admissions and Financial Aid (ADS 208, 569-3127) or online at http://www.ualr.edu/catalog/. Both the online and the printed versions were compiled and edited by Aaron Baker, Academic Publications and Online Editor. Production assistance was provided by Jenna Dixon, Barbara Alston, Karen Roberson, Jerry Stevenson, and UALR Printing Services. The cover was designed by Kristin Owlsley.

Right to Change Policies
Policies and procedures stated in this Catalog require continuing evaluation, review, and approval by appropriate University officials. All statements reflect policies or procedures in existence at the time this Catalog went to press, and the University reserves the right to change policies at any time and without prior notice.

Equal Opportunity/Affirmative Action
UALR adheres to a policy that enables all individuals, regardless of race, color, gender, national origin, age, sexual orientation, veteran’s status, or disability to work and study in an environment unfettered by discriminatory behavior or acts. Harassment of an individual or group will not be condoned and any person—student, faculty, or staff member—who violates this policy will be subject to disciplinary action.

Any person who believes they have been discriminated against should contact the Human Relations Officer to obtain assistance and information concerning the filing of complaints.

Harassment which is considered discriminatory includes actions or conduct (verbal, graphic, gestural, or written) directed against any person or group with the intent to demean or create a hostile or threatening environment.

It is not the intent of this policy to infringe upon or limit educational, scholarly, or artistic expression.

At the same time the University prohibits discriminatory practices, it promotes equal opportunity through affirmative action. Nondiscriminatory affirmative action equal opportunity policies apply to: recruitment, hiring, job classification and placement, work conditions, promotional opportunities, demotions/transfers, terminations, training, compensation, choice of contractors and suppliers of goods and services, educational opportunities, disciplinary action, recreational and social activities, use of facilities, housing, and University sponsored programs.

Family Educational Rights and Privacy Act (FERPA)
Students at the University of Arkansas at Little Rock have certain rights with regard to their educational records as stipulated by the Family Educational Rights and Privacy Act (FERPA). Students should consult the UALR Student Handbook for the delineation of those rights.

Equal Access for Students with Disabilities Policy
The University of Arkansas at Little Rock makes every effort to meet special accommodation and access needs. For information on specific accommodations for individuals with disabilities, contact the department or organization sponsoring the class or event you wish to attend, or call the Office of Disability Support Services at (501)569-3143. Bobbi Prior Pitts is the contact person for coordination of efforts to comply with and carry out UALR’s responsibilities under the Americans with Disabilities Act. If you have questions, concerns, or comments regarding accommodations and accessibility, you may contact her at UALR Health Services, (501)569-3188, 2801 S. University, Little Rock, AR, 72204.

Nondiscrimination Policies
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Sexual Assault Policy

The University of Arkansas at Little Rock explicitly condemns sexual assault as a violation of an individual’s human rights and dignity. Sexual assault is generally defined as attempted or actual unwanted sexual activity. The policy of UALR is that members of the University community neither commit nor condone sexual assault in any form. This prohibition applies equally to male and female staff, faculty and students, to all other persons on campus, to University control, and to those engaged to further the interests of the University.

Sexual assault is unlawful and may subject those who engage in it to civil and criminal penalties. A student or employee of UALR charged with sexual assault can be prosecuted under Arkansas criminal statutes and/or disciplined by the University. Even if criminal prosecution is not pursued, the University can pursue disciplinary action. Where there is probable cause to believe that the campus regulations prohibiting sexual assault have been violated, the campus will pursue strong disciplinary action through its own internal judicial channels. This discipline includes, but is not limited to, the possibility of termination, expulsion, suspension, disciplinary probation, counseling, mediation, educational sanctions, or a combination of these. Any conduct that constitutes a sexual offense under Arkansas law is also subject to disciplinary sanctions under this policy.

Victims of sexual assault have the right to file criminal charges with local law enforcement authorities and, upon request, are entitled to assistance from the University in notifying those authorities. Victims also have the right to file a complaint with the University to have a sexual assault allegation investigated by the University, and the right to participate in any disciplinary proceedings regarding the sexual assault complaint.

Because of the traumatic nature of sexual assault, victims are strongly encouraged to seek professional help. On campus, free and confidential counseling services and referrals are available at Counseling and Career Planning Services in Ross Hall 417.

Due to the nature and value of evidence, it is important that any sexual assault be reported as soon as possible. A complaint should be filed with the University within 30 days of the incident. The initial complaint may be filed with any of these University offices:
- The Department of Public Safety
- The Office of Campus Life
- The Office of Human Relations

UALR’s complete policy on sexual assault appears in the UALR Student Handbook.

Policy Prohibiting Sexual Harassment

It is the policy of the University of Arkansas at Little Rock to prohibit sexual harassment of its students, faculty, and staff.

Incidents of sexual harassment are demeaning to all persons involved and impair the ability of the institution to perform its educational functions.

Sexual harassment of employees is prohibited under Title VII of the Civil Rights Act of 1964, and sexual harassment of students may constitute discrimination under Title IX of the Education Amendments of 1972. Sexual harassment of employees is defined by the Equal Employment Opportunity Commission to include unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct which takes place when: submission to the conduct is either explicit or implicitly a term or condition of an individual’s employment; submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting that individual; or such conduct has the purpose or effect of unreasonably interfering with an individual’s work performance or creating an intimidating, hostile, or offensive working environment.

Sexual harassment of students includes unwelcome sexual advances, requests for sexual favors, other verbal or physical conduct which take place when: submission to the conduct is either explicit or implicitly a term or condition of an individual’s academic status or advancement; submission to or rejection of such conduct by an individual is used as the basis for academic decisions affecting that individual; or such conduct has the purpose or effect of unreasonably interfering with an individual’s academic performance or creating an intimidating, hostile, or offensive learning environment. Employees and students who believe that they have been subjected to sexual harassment are encouraged to report the problem.

University grievance procedures are available to individuals who wish to pursue complaints of sexual harassment. Informal complaints should be made to an ombudsman for sexual harassment. The goal of the informal process is to resolve problems. No disciplinary action will be taken as a result of the informal complaint procedure. Formal complaints against faculty, staff and administration should be submitted to the Office of Human Relations. Both formal and informal complaints should be made within 30 calendar days of the most recent alleged discriminatory act.

Smoking Policy

Smoking on UALR campuses is regulated under the authority of Act 462 of the 76th General Assembly of the State of Arkansas, 1987. In accordance with this statute and recognizing the ill effects of tobacco on both its smoking and nonsmoking faculty, staff, students and visitors, the University and its assembly declare that UALR buildings on all campuses shall be “smoke free.” Smoke free means no use of smoking materials of any kind inside UALR buildings. Employees and students who choose to smoke must do so during their authorized breaks outside of UALR buildings.

Smoking outside of buildings shall be at designated areas that are at least 30 feet from any entrance to the building and are equipped with receptacles for the appropriate disposal of the smoking materials.

All individuals are responsible for enforcement of this policy. If an individual cannot resolve a problem encountered while attempting to maintain the smoke free environment, the next in the chain of authority will be asked to help resolve the problem.

Standard disciplinary procedures shall be followed for students, staff, and faculty who fail to abide by this policy.(Adopted by the University Assembly. Effective 7/1/91, amended 2000)

HIV Policy

In support of its mission to discover and disseminate knowledge and to promote humane sensitivities and understanding of interdependence, the University of Arkansas at Little Rock endorses the following policy for responding to Human Immunodeficiency Virus (HIV) infection.

Based on conclusive evidence from the U.S. Public Health Services and Centers for Disease Control and Prevention, people living with HIV infection pose no threat of transmission through casual contact to those who are not infected. Because many people are infected and don’t know it, the University accepts an inclusive approach that recognizes any individual could be HIV positive. No screening or inquiries regarding HIV status will be made for admission or employment.

Access

People with HIV/AIDS are protected from discrimination by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Appropriate, reasonable accommodations will be made for students and employees who are infected and they will be accorded all rights of access and responsibilities in every aspect of University life as available to not infected persons. Acts of discrimination or abuse will not be tolerated. Confidentiality will be observed.

Prevention and Education

The University will provide ongoing training for students and employees that includes the following:
- Facts about infection, transmission, prevention, testing sites, and disclosure
- Skill development and equipment for self protection
- A climate that fosters care and respect for self and others

For information about educational programs contact the Offices of Health Services or Human Resource Services.

Support Services

The Health Services Office is the primary point of confidential contact for people living with HIV and will serve as a resource to the campus community regarding HIV issues on campus.

Support services and referrals are also available in the following offices: Counseling and Career Planning Services, Disability Support Services, and the Arkansas Employee Assistance Program.

Policy Implementation and Review

The University Health and Wellness Committee will be responsible for implementation of this policy. They will review this policy semi-annually or as scientific information emerges and submit revisions to the University Assembly for approval.

(Anged by the Faculty Senate, 4/19/96)
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### Fall 2006

#### Academic Calendar

Check online for the most recent Academic Calendar at [http://www.ualr.edu/provost/calendar.html](http://www.ualr.edu/provost/calendar.html)

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### August
- **28** Classes begin

### September
- **1** Last day to register, add, or drop classes
- **2** Labor Day Holiday, No classes
- **3** Labor Day Holiday, No classes
- **4** Labor Day Holiday, No classes, University Offices closed
- **9** First Saturday Class

### October
- **17** Last day to drop a class and receive a final grade of “W”
- **22** All classes end at 5 p.m. for Thanksgiving Holiday
- **23** Thanksgiving Holiday, No classes, University Offices closed
- **24** Thanksgiving Holiday, No classes, University Offices closed
- **25** Thanksgiving Holiday, No classes
- **26** Thanksgiving Holiday, No classes

### November
- **12** Last day of classes
- **13** Last day to withdraw from classes
- **14** Consultation day
- **15** Evening finals begin
- **16** Day finals begin
- **19** Evening finals end
- **20** Day finals end
- **21** Commencement
- **22** Grades due by noon
### Spring 2007

**January**
- 15 Martin Luther King Jr. Holiday
- 16 Classes begin
- 20 First Saturday Class
- 22 Last day to register, add, or drop a class

**February**

**March**
- 26 Spring break begins, No classes
- 30 Spring break, no classes, University offices closed

**April**
- 1 Spring break ends
- 2 Classes resume
- 13 Last day to drop a class and receive a final grade of "W"

**May**
- 3 Last day of classes
- 4 Last day to withdraw from classes
- 5 Consultation day
- 6 Evening finals begin
- 10 Evening finals end
- 11 Day finals end
- 15 Grades due by noon
- 19 Commencement
### Summer I 2007

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#### June

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#### July

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Fall 2007

August

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20 Classes begin
24 Last day to register, add, or drop classes

September

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1 Labor Day Holiday, No classes
2 Labor Day Holiday, No classes
3 Labor Day Holiday, No classes, University Offices closed
8 First Saturday Class

October

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9 Last day to drop a class and receive a final grade of “W”
21 All classes end at 5 p.m. for Thanksgiving Holiday
22 Thanksgiving Holiday, No classes, University Offices closed
23 Thanksgiving Holiday, No classes, University Offices closed
24 Thanksgiving Holiday, No classes
25 Thanksgiving Holiday, No classes

November

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29 Last day of classes
30 Last day to withdraw from all classes

December

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6 Consultation day
7 Evening finals begin
12 Evening finals end
13 Day finals end
17 Grades due by noon
Spring 2008

January

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14 Classes begin
18 Last day to register, add, or drop a class
19 First Saturday Class
21 Martin Luther King Jr. Holiday

February

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TBA Spring break will match the Little Rock Public Schools Spring Break, and is usually announced in July 2007. Check the online academic calendar for the most recent dates, http://www.ualr.edu/provost/calendar.html

March

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11 Last day to drop a class and receive a final grade of “W”

April

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5 Last day of classes
Last day to withdraw from classes
6 Consultation day
Evening finals begin
7 Day finals begin
15 Grades due by noon
17 Commencement
Summer I 2008

May

- 26 Memorial Day Holiday, No classes, University Offices closed
- 27 Classes begin
- 28 Last day to register, add, or drop a class

Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

June

- 23 Last day to drop a class and receive a final grade of "W"
- 27 Last day to drop from all classes
- 30 Last day of class, Final Exams

Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

July

- 4 Independence Day Holiday, No classes, University Offices closed
- 23 Last day to drop a class and receive a final grade of "W"

Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

August

- 5 Last day to withdraw from all classes
- 6 Last day of classes, Final Exams
- 8 Grades due by noon

Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Summer II 2008

- 26 Memorial Day Holiday, No classes, University Offices closed
- 27 Classes begin
- 28 Last day to register, add, or drop a class
- 23 Last day to drop a class and receive a final grade of "W"
- 27 Last day to withdraw from all classes
- 30 Last day of class, Final Exams

Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
GUIDE TO UALR

General Information

About the Undergraduate Catalog
The Undergraduate Catalog is an official publication of UALR, revised annually. It provides information about degree programs, course offerings, and academic regulations that affect undergraduate students. There are separate catalogs for UALR’s graduate and law programs.
The chapter titled “Academic Policies & Requirements” on page 25 lists all the degrees UALR offers, and describes the general requirements for both baccalaureate and associate degrees.

The baccalaureate degree requires a student to complete a core curriculum consisting of certain required courses, a major field of concentration and, unless otherwise specified by the major, a minor field of concentration. For the associate degree there is another version of the required core curriculum courses. Other University requirements, including the minimum number of credit hours and a minimum grade point average, are listed under specific programs.
The chapter titled “University College” on page 35 is important for beginning students. All students new to UALR, with the exception of Donaghey Scholars, are admitted to University College, where advisors help them choose and clearly define their area of study and career goals and to understand the opportunities and responsibilities of a university student. First- and second-year Donaghey Scholars are advised through the Donaghey Scholars Program.
The Catalog is arranged by departments or divisions within colleges, and each of these sections describes the requirements for a major or a minor in that area, as well as all the courses each department offers. Most courses are scheduled at least once every two years. The chapter called “Interdisciplinary Study” on page 37 describes degrees that involve work in more than one department or college.
The other chapters help provide a full picture of UALR. The “Academic Calendar” on page ix lists the dates and deadlines you need to know as an undergraduate student. “History & Mission of UALR” on page 3 describes the goals and history; “Admissions & Financial Aid” on page 13 tells you how to apply; “Tuition and Fees” on page 21 tells you how much it will cost; “Student Life and Activities” on page 25 describes the services and activities available to you at UALR, and “Student Aid & Scholarships” on page 23 describes some possibilities for financial assistance. “Academic Policies & Requirements” on page 25 lists some of the programs and awards available to exceptional students at UALR.
The Catalog ends with a listing of the faculty, staff, and administrators. A glossary and an index are also included for convenience.

How to Get Help
Often the information you need can be obtained on the UALR web site at http://www.ualr.edu/ or by telephone. Departmental numbers are included in their respective sections within the Catalog. For other numbers, consult the business pages in the Little Rock telephone directory.

For information not included on the UALR web site, go directly to the office with the title that matches your needs: the Office of Admissions and Financial Aid and the Office of Records and Registration are most often needed by incoming students. These offices are located on the second floor of the Administration South building. The Office of Academic Advising provides advice on the selection of required courses and programs for undeclared majors. All students who are undecided about a specific field of study must contact this office, located on the fourth floor of Ross Hall. If you have decided on a major or have narrowed your choice to a few areas, contact either the academic advisor, the chairperson of the appropriate department, or the dean of the college or school.

If you have a problem or concern regarding student life on campus, or have a question about student judicial affairs, start at the Office of Campus Life, located on the upper level of the Donaghey Student Center. An Information Center is also located in the Donaghey Student Center; personnel there can assist you with specific questions.
The UALR Registration Guide and Class Schedule, which is described on the following page, contains the office locations and telephone numbers of the academic advisors. 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 vice chancellor.

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

Transfer Students
A transfer student is one who has previously enrolled at another college or university at any time. If you are a transfer student, you should seek advising before you register for classes. The chapter called “Admissions & Financial Aid” on page 13 describes the transfer policies in general terms. Your transfer work will be evaluated once all of your required documents are received. The transfer credit equivalency guide for Arkansas schools is available on the UALR web site at http://www.ualr.edu/.
All transfer students are initially admitted into University College. After you have decided on a major, ask the department chairperson or the dean of the college in that area to evaluate your transfer work. One often misunderstood point is that a given course may be accepted toward the total hours required for a degree at UALR, but not be accepted as meeting a specific course requirement for the core curriculum or for a major or minor.

**Online Registration Guide and Class Schedule**

After you are generally familiar with the Catalog, the next step toward taking courses at UALR is to view the UALR Registration Guide and Class Schedule online at [http://boss.uarl.edu/](http://boss.uarl.edu/). A printed version is also available each semester.

The UALR Registration Guide/Schedule contains information on the web registration process and lists the courses that will be offered during specific semesters by course, time, location, and instructor. The registration guide also contains the academic calendar, the final examination schedule, and deadlines for various activities during the semester.

UALR offers courses in the fall, spring, and summer. The Summer semesters are divided into one 10-week term (Summer I) and two 5-week terms (Summer II and IV). Summer III is no longer offered. UALR also offers courses at other times, such as during the interim between each semester and at different time periods during a semester or term.

Courses are also offered on television, via the internet, or off campus. A note after a course listing, a special section in the UALR Registration Guide and Class Schedule, or a separate publication will tell you when courses are offered at times or places other than the regular schedule.

During a regular semester or term, the usual three-credit-hour daytime course will meet for 50 minutes a day on Monday, Wednesday, and Friday, or for one hour and 15 minutes on either Monday and Wednesday or Tuesday and Thursday. But here, too, some classes will meet on different time schedules, such as one three-hour session per week.

All of these options are part of UALR’s effort to offer classes in times and places that suit the needs of all students, but it also means you have to read the UALR Registration Guide/Schedule carefully.

A typical course entry and an explanation of each part of it is provided below.

- **60725**: The five-digit course reference number (CRN) assigned for registration. The five-digit CRN number is necessary for registration and is not the same as the course number.
- **MATH**: The department or curriculum area with its assigned four-letter code. See the chart on the following page for a comprehensive list of UALR course codes.
- **0300**: The course number assigned by the department. It indicates the level and number of credit hours for the course. See “Course number” on page 238 for more details.
- **97**: The section number assigned by the department. See “Section” on page 239 for more details.
- **09:00-11:55am**: The time the class begins and ends. The exact time for TBA courses will be provided by the department or instructor.
- **RH**: The building where the class meets, in this case Ross Hall (RH). See “Building Codes” on page 244 for a comprehensive list of UALR building codes and a map of the campus.
- **312**: The room number where the class will meet (RH 312).
- **STAFF**: The name of the instructor assigned to this class. If the word “Staff” appears here, the teacher for the class had not yet been assigned at the time the schedule was prepared.
- **NOTE**: Some classes will have specific information displayed here for students to consider before registering.
HISTORY & MISSION OF UALR

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

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

In 1957 the institution began a four-year degree program, became independent and privately supported under a separate board of trustees, and took the name Little Rock University.

After several years of discussion and study, Little Rock University in September 1969 merged with the University of Arkansas to create the University of Arkansas at Little Rock. That was a major step in the creation of a multi-campus system that now includes eight campuses: University of Arkansas at Fayetteville; University of Arkansas for Medical Sciences; University of Arkansas at Little Rock; University of Arkansas at Pine Bluff; University of Arkansas at Monticello; Phillips Community College of the University of Arkansas; University of Arkansas Community College at Hope; and University of Arkansas Community College at Batesville. Within this structure, UALR is state supported, operationally separate, and specifically oriented toward serving the educational needs of Arkansas.

The University of Arkansas merger began a period of rapid growth, which saw UALR go from about 3,500 students and 75 full-time faculty members in 1969 to about 11,000 students and 500 full-time faculty members today. The University's expanded offerings now include more than 100 undergraduate majors, an extensive schedule of night, weekend, and off-campus classes, and a wide range of community educational services. UALR began offering graduate and professional work in 1975 and the UALR Graduate School was created in 1977. UALR is the only institution in the state to have earned the Carnegie ranking as "Research/Doctoral University - Intensive." Besides the juris doctor, UALR has three doctoral programs and 39 graduate and professional programs, as well as joint programs with other campuses of the University of Arkansas System. Presidents include R.C. Hall (1927-1930), John A. Larson (1930-1950), Granville Davis (1950-1954), E.Q. Brothers (acting president 1954-1956), and Carey V. Stabler (1956-1969).


About the Mission
Most universities today develop and publish statements explaining their purposes and describing their programs. Official boards that govern a campus or coordinate its activities in relation to other campuses also develop and publish such statements. For UALR there are mission statements and role and scope statements developed at three levels: the University of Arkansas System, the statewide coordinating board, and the campus. Although not identical, the statements are similar and consistent in content, each reflecting a different perspective from a different level of responsibility.

The mission statement typically is brief, general, and philosophical. It states why the institution exists. It addresses fundamental purposes and permanent commitments. It distinguishes the university from other societal institutions such as a church, a factory, a political party, or an elementary school.

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

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

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

University of Arkansas System Mission
The University of Arkansas is a comprehensive, multi-campus, publicly-aided institution dedicated to the improvement of the mind and spirit through the development and dissemination of knowledge.

The University embraces and expands the historic trust inherent in the land-grant philosophy by providing access to academic and professional education, by developing intellectual growth and cultural awareness in its students, and by applying knowledge and research skills to an ever-changing human condition. (Adopted by the University of Arkansas Board of Trustees, 1989)
Mission
The mission of the University of Arkansas at Little Rock is to develop the intellect of students; to discover and disseminate knowledge; to serve and strengthen society by enhancing awareness in scientific, technical, and cultural arenas; and to promote humane sensitivities and understanding of interdependence. Within this broad mission are the responsibilities to use quality instruction to instill in students a lifelong desire to learn; to use knowledge in ways that will contribute to society; and to apply the resources and research skills of the University community to the service of the city, the state, the nation, and the world in ways that will benefit humanity. (Adopted by the UALR Faculty Senate, 1988)

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

- **Excellence in Instruction:** The University has a responsibility to provide excellence in instruction to ensure high-quality education for our students. This responsibility includes developing faculty teaching skills, awareness of the ways students learn, assessing student learning outcomes, and enhancement of resources to support effective instruction.
- **Scholarly Inquiry:** The University has a responsibility to use scholarly inquiry to advance the discovery, preservation, and dissemination of knowledge. This responsibility includes the creation of a university environment that supports diverse research activities by faculty, staff, and students.
- **Service to Society:** The University has a responsibility to serve society through the application of knowledge and research skills. This responsibility includes applying the University’s resources to local, state, national, and international needs in order to improve the human condition.
- **Community of Learning:** The University has a responsibility to provide a community of learning through creation of an academic environment that stimulates students, faculty, and staff to become lifelong learners. This environment should heighten the intellectual, cultural, and humane sensitivities of students, faculty, and staff.
- **Accessibility:** The University has a responsibility to serve the needs of a heterogeneous student population and to make its resources accessible to the general public and to local, state, national, and international groups. This responsibility includes creating opportunities for access to the University’s academic and other resources.
- **Responsiveness:** The University has a responsibility to remain responsive to a changing environment and society. This responsibility includes a continuous assessment of the University’s strengths and weaknesses in planning for and meeting internal and external needs. It also includes developing the faculty, staff, and students’ desire and capacity in order to create an academic community that is open to change and ready to meet the demands of a dynamic environment and student body.

(Adopted by the UALR Faculty Senate, 1988)

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

UALR serves a diverse student body. While it serves traditional students as do most other universities, UALR also serves large numbers of nontraditional students who enroll part-time, commute to campus, have jobs and family responsibilities, and may be older. The university also enrolls international students from more than 50 countries. Honors courses and a nationally recognized undergraduate scholars program respond to the needs of superior students while students with developmental needs are afforded organized assistance in meeting their educational goals. UALR emphasizes excellence in teaching by all faculty. Developing technological competence in students receives particular attention.

UALR is strongly committed to research and public service. Faculty engage in applied and basic research appropriate to their academic discipline and in response to economic development needs and other state and regional needs. The university is committed to supporting research and development, often in cooperative relationships, leading to intellectual property and commercialization. UALR’s public service mission is reflected in numerous outreach activities by individual faculty members, academic units, and a number of specialized units established to provide assistance and expertise to organizations and groups in the community and across the state.

Partnerships are very important to UALR for they enable the university to extend its reach, increase its effectiveness, and leverage its resources. UALR works with other institutions of higher education—particularly the University of Arkansas for Medical Sciences, the University of Arkansas Cooperative Extension Service, the University of Arkansas Clinton School of Public Service, and Pulaski Technical College—to coordinate instructional programs. UALR partners with and complements the research activities of the University of Arkansas for Medical Sciences. UALR gives and receives benefit from partnerships with businesses, schools, governmental offices, neighborhood groups, cultural organizations, and nonprofit organizations. (Adopted by the University of Arkansas Board of Trustees, 1978; revised 1982, 1989, 1991, 2006)

Role and Scope
UALR is a comprehensive university which offers a certificate program, a first professional degree program in law, two EdD programs, a PhD in applied science, and a wide range of associate, bachelor’s, master’s, and specialist degree programs. Because of its location in the state’s capital city and largest metropolitan area, UALR assumes a special role in relation to the needs of urban areas in modern society in its instruction, research, and service programs. In addition, UALR serves as the host campus for a master’s degree in engineering and master’s degrees in vocational education and rehabilitation education offered by UAF.

UALR shares its resources in numerous public service activities on and off campus. These include non-credit offerings which range from special programs for pre-collegiate students, particularly the gifted and talented, to personal enrichment and professional advancement courses for adults. Through its research and public service units and the Graduate Institute of Technology, UALR performs a state-wide service role in economic and community development through assistance to business and industry, seminars for managers and workers, and support for entrepreneurial ventures. The institution provides similar research, advice, and assistance to governmental agencies, educational institutions, and other community organizations and groups. UALR also provides leadership in cultural enrichment and makes its own cultural resources available to the community. UALR cooperates with state agencies in advancing international education and economic development, and hosts the Arkansas Public Administration Consortium, which coordinates graduate internships in state government agencies and provides in-service training programs for government employees.

UALR research is of growing importance. Much of the research is applied research related to the institution’s professionally-oriented graduate programs and extensive public service mission, although faculty members associated with the Graduate Institute of Technology also have special responsibility for basic research. In addition, cooperative research projects with UAMS, the Veterans Administration Medical Center, and the National Center for Toxicological Research play an important role in developing the central Arkansas scientific corridor. (Adopted by the Arkansas State Board of Higher Education, 1989; amended 1992)

Role and Scope
The University of Arkansas at Little Rock offers certificates and degree programs at the associate, baccalaureate, master’s, specialist, and doctoral levels. Disciplines in which degrees are offered include applied science, the arts, business, health, and public administration; communication; education; engineering technology; the humanities; law; social, physical, and life sciences; and social work. The institution emphasizes the liberal education of undergraduate students and offers more focused professional study, particularly at graduate levels.
The University of Arkansas at Little Rock, taking advantage of its metropolitan location, offers programs and services that respond to the special needs and interests of individuals, organizations, institutions, businesses, and governmental units. Academic programs, student services, research activities, public service projects, and institutional policies reflect the University’s commitment to a diverse student body composed of recent high school graduates, students returning to school after other experiences, retirees, international students, disabled students, and professionals seeking career change or enrichment. A significant percentage of these students attend school part-time and work full- or part-time. As a result, many UALR students bring experience and a high level of motivation into the classroom.

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

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

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

The University anticipates continued growth in the number of students and in the number and size of academic programs. The primary aim of the University in all of its varied activities will continue to be maintaining and improving the quality of education for all its students. (Adopted by the UALR Faculty Senate, 1988)

Assessment

Units across campus regularly engage in research to assess UALR’s success in meeting these objectives. Assessment at UALR is designed to help the academic programs – whether core, undergraduate, or graduate – focus on what should be taught in the program and whether it is being taught successfully. This involves a variety of methods of inquiry to examine student needs, attributes, and success in learning. Each academic unit at UALR has an assessment program to conduct research that will be used to make decisions to improve its curriculum, instruction, and both academic and career advising. Students, alumni, and various stakeholders participate in a variety of assessment activities designed to assess learning in the major, and in the core curriculum.

Accreditations and Affiliations

The University of Arkansas at Little Rock is fully accredited by the North Central Association of Colleges and Schools. Specific degree programs and their accreditations follow.

- The Department of Art is an accredited institutional member of the National Association of Schools of Art and Design.
- The Department of Music is accredited by the National Association of Schools of Music.
- The Department of Theatre is accredited by the National Association of Schools of Theatre.
- The undergraduate program in business and the master of business administration are accredited by the American Assembly of Collegiate Schools of Business.
- All eligible programs in the College of Education are accredited by the National Council for Accreditation of Teacher Education.
- The audiology and speech pathology programs of the Department of Audiology and Speech Pathology are accredited, and the department is approved as a continuing education sponsor, by the Education Services Board of the American Speech-Language-Hearing Association.
- The Department of Military Science is accredited by the United States Army Cadet Command, 4th ROTC Region.
- The Basic Animal Services Unit is accredited by the American Association for Accreditation of Laboratory Animal Care and is registered with the United States Department of Agriculture.
- The bachelor of science program in chemistry is approved by the Committee on Professional Training of the American Chemical Society.
- The associate of science program in nursing is approved by the Arkansas State Board of Nursing Accrediting Commission.
- The four-year baccalaureate, construction management program is fully accredited by the American Council for Construction Education (ACCE). The ACCE is recognized by the Council for Higher Education Accreditation as the national accrediting agency for four-year baccalaureate programs in construction education.
- The bachelor of science in computer science program is accredited by the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board.
- Both the associate and bachelor of science degrees in the electronics and mechanical engineering technology programs and the bachelor of science degree in computer engineering technology programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).
- The systems engineering program is accredited by the Accreditation Board for Engineering and Technology (ABET).
- The master of public administration program is accredited by the National Association of Schools of Public Affairs and Administration.
- The health services administration program is accredited by the Accrediting Commission on Education for Health Services Administration.
- The undergraduate and graduate programs in social work are accredited by the Council on Social Work Education Commission on Accreditation.
- The School of Law is accredited by the American Bar Association and the Association of American Law Schools.

Academic affiliations include:

- The American Association of Colleges for Teacher Education
- The American Assembly of Collegiate Schools of Business
- The American Association of University Women
- The American Association of State Colleges and Universities
- The Association of Urban Universities
- The Conference of Southern Graduate Schools
- The Cooperative Assessment of Experiential Learning
- The Council of Graduate Schools in the United States, International Institute for Learning
- The National Association of Summer Sessions
- The National Commission on Accrediting
- The National University Extension Association
- The North Central Conference on Summer Schools.

UALR is a Service Members Opportunity College.
Competencies and Core Curriculum

The purpose of the core curriculum is to establish a foundation for the undergraduate academic experience and to ensure that students develop fundamental skills and a lifelong commitment and ability to learn. All courses stress active learning. In addition, all courses are aimed at one or more of these basic competencies.

- Aesthetic Experience: This competency includes knowledge about different art forms and their history; an understanding of how creative processes compare among art forms; and the ability to describe and analyze artistic works.
- Critical Thinking: Critical thinking requires the ability to analyze data, synthesize information, make decisions, and systematically and imaginatively solve problems. All core courses stress critical thinking, providing practice in the techniques of inquiry, logical reasoning, and critical analysis.
- Ethical and Moral Consciousness: Competency in this area involves the ability to recognize ethical and moral issues that may arise from scientific and technological developments or that may be inferred from aesthetic and humanistic works.
- Historical Consciousness: Historical consciousness requires the knowledge of the main stages of human cultural development, along with the ability to relate one's historical heritage to that of other cultures, past and present. This competency involves understanding historical events, whether social, economic, or political, and then examining the relationships among them—relationships such as change, continuity, and causation.
- Information Technology: Competency requires using contemporary technologies to communicate effectively; to locate, manage and analyze information; to critically evaluate information obtained through these technologies; to comprehend basic information technology concepts in order to understand and quickly assimilate new technologies as they evolve; and to have an understanding of and respect for the ethical and legal aspects of the use of information technology.
- International Awareness: The international awareness competency involves the ability to examine one's own culture, society, and nationality from perspectives acquired through understanding other cultures and nations, including their languages, literature, art, history, and geography.
- Mathematics: Competency in mathematics includes an understanding of the concepts, the methodology, and the application of probability and statistics; the ability to use and interpret functions and graphs to express relationships; an appreciation of the importance of numerical information; and a recognition of both the role and the limitations of mathematics in all areas.
- Philosophy and Methods of Science: Competency in the philosophy and methods of science involves understanding the strengths and limitations of science, including how scientists learn about the world through observation and experiment, through modeling and interpretation, and through the skeptical scrutiny of the work of other experts in the field. This competency includes the following: an awareness of relationships between science and society; the ability to use scientific reasoning to evaluate conflicting statements in order to arrive at informed opinions on contemporary issues; an appreciation of how experiencing the universe scientifically differs from experiencing it in other ways; and knowledge of the questions that science neither asks nor answers.
- Social and Cultural Awareness: Social and cultural awareness requires viewing human beings as organisms functioning within a set of global, interconnected systems, including nationality, ethnicity, race, gender, class, law, religion, and communication—that influence and are influenced by changing individuals. This competency includes knowledge about how persons develop and grow; awareness of how social and cultural systems influence values, thought, and behavior; and appreciation for the interactions, conflicts, and communication among systems.
- Verbal Literacy: Verbal literacy includes four skills: writing, reading, speaking, and listening and the ability to use language to learn and participate in the discourse and decision-making of academic, personal, professional, and public life. Competency in written literacy involves the ability to read and write clearly and thoughtfully; to understand different writing and reading processes; and to use these processes to advantage when writing and reading about experiences and ideas. Competency in oral literacy involves public speaking and interpersonal and small group communication. All core courses address this competency.
Literacy
All three courses are required (9 credit hours):

RHET 1311 Composition I
Practice in writing, with an emphasis on personal, expressive writing, as well as transactional writing. Focus on organizing and revising ideas and writing well organized, thoroughly developed papers that achieve the writer's purpose, meet the readers' needs, and develop the writer's voice. Final course grades are A, B, C, or no credit. Students must complete this course with a grade of C or greater to take Composition II. Three credit hours.

RHET 1312 Composition II
Prerequisite: RHET 1311 with a C or greater or equivalent. Those students requiring second composition to meet the state law will enroll in READ 0310 must successfully complete that course before enrolling in Composition II. Practice in writing, with an emphasis on academic forms. Focus on analysis, argumentation, and research and documentation writing. Final course grades are A, B, C, or no credit. Three credit hours.

SPCH 1300 Speech Communication
Helps students effectively deliver an oral presentation to an adult audience; listen to and critique objectively the oral presentations of others; effectively participate in one-to-one communication experiences using techniques of active listening, conflict resolution, and information gathering; effectively organize, participate in, and lead small groups as they problem-solve; and recognize and use effective oral language as a tool of sound reasoning. Student performance is emphasized along with lecture, discussion, and self-instructional study center exercises. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Three credit hours.

Mathematics
One of the following courses is required (3 credit hours):

MATH 1302 College Algebra
Prerequisite: a grade of C or greater in MATH 0301, an equivalent transfer course, or a suitable score on a mathematics placement test (See “” on page 31). Relations, functions, graphing, systems of linear equations and inequalities, matrices and determinants, roots of polynomials, logarithmic and exponential functions, sequences, series, mathematical induction and the binomial theorem. Three hours. Three credit hours.

MATH 1315 College Mathematics
Prerequisite: a grade of C or greater in MATH 0301, the equivalent, or a suitable score on a mathematics placement test (See “” on page 31). Functions, analytic geometry, formulas and variation; set theory; logic; probability and statistics, combinatorics, populations, samples, normal distribution, mean, variance, and standard deviation. This course is as sophisticated as College Algebra and satisfies the state mandated requirement for the baccalaureate degree. Three credit hours.

Philosophy and Methods of Science
Eight (8) hours are required from the following courses:

ANTH 1415 Physical Anthropology
A hands-on examination of the study of past and present human and nonhuman primates as biological organisms. Topics include human genetics, variation and osteology, nonhuman primate taxonomy and behavior, forensic anthropology and the human fossil rock. Four credit hours.

ASTR 1101 Introduction to Astronomy Laboratory
Prerequisite or corequisite: ASTR 1301 or 1311. A laboratory course designed to accompany ASTR 1301. Projects involve a variety of activities in data acquisition and analyses of which the concepts discussed in the classroom to real-world experiences. Students do these projects in the open laboratory, the planetarium, and the observatory. One credit hour.

ASTR 1301 Introduction to Astronomy
An introductory astronomy course in which students learn about the process of science by studying the various methods by which we have learned our place in the universe. Students will study specific examples of the kinds of observations which can be made and the inferences drawn from them. Examples will emphasize how we have obtained our knowledge of the universe and the certainty of various parts of that knowledge. This course, together with the associated lab, ASTR 1101, will satisfy four hours of the science core curriculum requirement. Three credit hours.

1. Students may substitute four (4) hours of the eight (8)-hour science requirement in the core curriculum with technical courses, with certain conditions. The substitution will be two for one; the student must take two (2) hours of a technical course for every one (1) hour of an approved competency course. A technical course is defined as any science course at the 1000-level or above that is not approved as a core course. Each substitute course must have a laboratory component, and all substitute courses must be from the same discipline. A science course is from the disciplines of anthropology, astronomy, biology, chemistry, earth science, or physics. The remaining four (4) hours of the science competency requirement must be met by an approved core course.

BIOL 1400 Evolutionary and Environmental Biology
Evolutionary, ecological, and environmental interrelationships among organisms. Basic biological principles and modern technology form the basis for inquiry and debate. The impact of society upon global biodiversity is examined from competing viewpoints. The role of science in shaping society and the influence of society upon science are evaluated. Students learn through reading, writing, computer simulations, videos, field exercises, and through participation in critical thinking and problem-solving activities. Three hours lecture, two hours laboratory. Four credit hours.

BIOL 1401 Science of Biology
The process of science, including observation, evaluation, and predictions, will be applied to the understanding of biological principles. The methods of science will be illustrated in the study of major biological concepts including the cell theory, energy transformation, inheritance, and the theory of evolution. Selected biological systems will be surveyed to compare life forms to examine current human related issues. Three hours lecture, two hours laboratory. Four credit hours.

CHEM 1409 Chemistry and Society
A general education course for non-science majors which satisfies four hours of the lab science requirement in the University core curriculum. This course examines the impact of chemistry on today’s world. Ideas about the atom, the nature of radioactive elements, chemical bonding, plastics, pollution, drugs, and pesticides are sample topics which will be covered from both a scientific and historical perspective. Satisfies four hours of the lab science requirements in the University core curriculum. Three hours lecture, three hours laboratory per week. Four credit hours.

ERSC 1102 Physical Geology Laboratory
Prerequisite or corequisite: ERSC 1302. A laboratory course designed to accompany ERSC 1302. Students observe, gather and manipulate data, interpret data, and make field measurements using minerals, rocks, graphs, and maps. The laboratory meets for two hours per week. One credit hour.

ERSC 1103 Historical Geology Laboratory
Prerequisite or corequisite: ERSC 1303. A laboratory course designed to accompany ERSC 1303. Students are involved in geologic data gathering, manipulation, and interpretation along with field measurements and problem solving. Two hours laboratory. One credit hour.

ERSC 1302 Physical Geology
Introduction to the science of geology, the geological view of the human environment, how geologists learn about Planet Earth, and how society and geology interact. Active learning applied to natural processes shaping the earth’s surface, producing the solid and fluid earth, and historical development of geological paradigms. Three hours lecture. Three credit hours.

ERSC 1303 Historical Geology
Introduction to the science of geology, how geologists have learned about the Earth using geologic time as a theme. Active learning applied to various measurements of time, the documentation of evolutionary changes presented by the geologic record, and the development of geologic paradigms used in interpreting this record. Three hours lecture. Three credit hours.

Aesthetic Experience
Six (6) hours are required from one of the following two sequences:

Sequence I

ARHS 2200 Introduction to Visual Art
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of art, vocabulary and descriptive terms used in the visual arts, and how to write about them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with MUHL 2200 and DRTH 2200. Two credit hours.

MUHS 2200 Introduction to Music
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of music, vocabulary and descriptive terms used in the musical arts, and how to write about them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with ARHA 2200 and DRTH 2200. Two credit hours.

Sequence II

DRTH 2200 Introduction to Theatre and Dance
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of theatre and dance, vocabulary and descriptive terms used in these disciplines, and how to write about them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with ARHA 2200 and MUHL 2200. Two credit hours.

1. Fine Arts majors and students interested in the arts are encouraged to choose FNAR 2300/2301; other students should choose the first sequence.

Competencies & Core Curriculum 7
SEQ 2300 Introduction to Fine Arts I
Prerequisite: RHET 1311. A course for students majoring in or with special interest in the arts. The first of two courses designed to give students competence in aesthetic experience through integrated studies in arts, music, and theatre/dance. Introduction to the arts and the creative process, how to write about the arts, and vocabulary and descriptive terms used in them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with FNAR 2901. Three credit hours.

FNAR 2301 Introduction to Fine Arts II
Prerequisite: FNAR 2900. Recommended: HIST 1311 or 1312. A course for students majoring in or with special interest in the arts. The second of two courses designed to give students competence in aesthetic experience through integrated studies in arts, music, and theatre/dance. Introduction to the history of the various visual and performing arts and their interrelationships and to the study of eras and periods through their artistic creations. Further develops skills in describing and analyzing the arts. Attendance at arts events is required. Fulfills core requirement in aesthetics along with FNAR 2901. Three credit hours.

International Awareness and Ethical and Moral Consciousness
Three (3) hours are required, chosen from the following courses:

ENGL 2337 World Literature
Prerequisite: completion of the first year writing requirement. Study of selected texts reflecting various Western and non-Western literary heritages and traditions. Assigned works represent several national literatures, with at least one major text from each of four periods (antiquity, medieval, early modern, and the modern period) and from a minimum of three literary genres. Three credit hours.

ENGL 2338 World Literature Themes
Prerequisite: completion of the first year writing requirement. This class addresses the same competencies as ENGL 2337, but through exploration of a specific topic. Either 2337 or 2338 satisfies the core requirement, but they are distinctive courses and both may be taken for credit. Three credit hours.

PHIL 2320 Ethics and Society
Prerequisite: RHET 1311 recommended. Study of selected texts reflecting a variety of ethical systems from Western and non-Western literary heritages and ethical traditions. Assigned works represent several national ethical literatures, with at least one major ethical text from each of four periods (antiquity, medieval, early modern, and the modern period). Three credit hours.

Historical Consciousness
Both courses are required (6 credit hours):

HIST 1311 History of Civilization I
Recommended prerequisite: RHET 1311. The history of the world’s significant civilizations from their beginnings to approximately A.D. 1600; the development of integrated political, social, economic, religious, intellectual, and artistic traditions and institutions within each of those cultures; significant intercultural exchanges. Three credit hours.

HIST 1312 History of Civilization II
Recommended prerequisite: RHET 1311. The history of the world’s significant civilizations since approximately A.D. 1600; examination of the persistence of traditional civilizations and the changes in the world order due to the development of modern industrial society, modern science, and the nation state. Three credit hours.

In addition, one of the following courses is required (3 credit hours):

POLS 1310 American National Government
An introduction to the political institutions, processes, and patterns of the national government of the United States, focusing on the Congress, presidency, and courts, and on their interrelationships. Attention is given to suffrage and elections, political parties, interest groups, and public opinion. Significant issues and problems of national policy such as civil rights and civil liberties are considered. Three credit hours.

HIST 2311 US History to 1877
Description, analysis, and explanation of the major political, social, economic and diplomatic events through “Reconstruction.” Special attention is devoted to the cross-cultural development of three civilizations, Native American, European, and African, within the geographical context of the North American continent. Major topics for study include European colonial empires; the American Revolution; the Constitution of 1787; evolution of a national government; federal in system and republican in form; social and economic theories and practices; relationship with foreign governments; and the American Civil War. Three credit hours.

HIST 2312 US History since 1877
Description, analysis, and explanation of the political, social, economic and diplomatic events to the present time. Special attention is devoted to the forces of modernity and the impact of cultural revolution on traditional institutions. Major topics for study include industrialization; agrarianism; labor; immigration; reform movements; total and limited war; economic theory and practice; and the US’s role in world affairs. Three credit hours.

Social and Cultural Awareness
Two of the following courses are required (6 credit hours):

ANTH 2316 Cultural Anthropology
Prerequisite: RHET 1311 recommended. Examines the concept of culture, cultural processes, and anthropological theories. Topics include subsistence strategies, politics, religion, gender, ethnicity, economics, marriage, stratification, and socialization. Case studies from both small-scale and large-scale societies. Three credit hours.

CRJU 2300 Introduction to Criminal Justice
An exploration of the historical development, current operation, and future trends of criminal justice. Emphasis on theoretical problems in the definition of law, the enforcement of law, strategies of policing, judicial systems, sentencing strategies, and correctional practices. Content includes not only practices in the United States, but also other cultures and their systems of justice. Three credit hours.

ECON 2301 Survey of Economics
The wants of individuals and societies are unlimited, while the resources for satisfying these wants are limited. Consequently, choices have to be made. Economics is the science of choice. Survey of Economics introduces students to the ability to use theories to make sense out of the world and devise policy solutions to economic problems. Both individual and firm choices (microeconomics) and society choices (macroeconomics) are examined. The role of markets in summarizing choices and allocating resources is introduced. ECON 2301 will not satisfy the University Core Curriculum requirements if ECON 2232 and ECON 2232 are taken for graduation credit. Three credit hours.

GNST 2300 Introduction to Gender Studies
Recommended: RHET 1311. A cross-cultural, interdisciplinary analysis of gender. Includes examination of gender identity, social roles, and cultural symbolism in politics, economics, family, health, socialization, religion, and language. Three credit hours.

GEOG 2312 Cultural Geography
Recommended: RHET 1311. The nature, distribution, and development of various cultural systems as they interact with each other and with their environment. A study is made of spatial patterns in the elements of culture, including population, religion, language, politics, economics, and subsistence and settlement. Examination of the processes that have changed the natural landscape to a cultural landscape. Three credit hours.

JOUR/RTVF 2330 Mass Media and Society
Survey of relationships involving mass media, culture, and various other interconnected systems, both nationally and globally. Includes discussion of functions, freedoms, and responsibilities of mass media, and effects on individuals and social groups. Topics will include newspapers, magazines, radio, television, and other media. Three credit hours.

POLI 2301 Introduction to Political Science
Introduction to social science concepts as applied to political analysis. Analysis of individual, groups, and society, particularly the study of social, economic, and political structures and behavior. Introduction to the discipline of political science as a social science, including enduring questions about politics, nature of political analysis, major theoretical and empirical approaches, and critiques of the discipline. Three credit hours.

PSYC 2300 Psychology and the Human Experience
Recommended prerequisite: RHET 1311. This course focuses on the development of the individual in the context of physical and social environments. Topics include the scientific method as it applies to studying the individual, the relationship between brain and behavior, social and personality development, theories of motivation, maladaptive behavior, social cognition and interaction, and the effects of membership in different groups on the development of the individual. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Three credit hours.

RELS 2305 Religious World Views
Prerequisite: RHET 1311 recommended. Examines the global patterns of contemporary world religions as symbol systems and expressions of discrete, coherent world views. Three credit hours.

SOCI 2300 Introduction to Sociology
Recommended prerequisite: RHET 1311. Introduction to sociological concepts. Analysis of society, particularly the study of human organization. An overview of the theories and methods utilized in the discipline is provided and will be used as a framework for critical analysis. Students will learn to investigate group and societal connections in major social institutions-religion, family, politics, economics, education. Three credit hours.
Degree Programs Offered at UALR

Doctor of Philosophy
Applied Science
Bioinformatics
Communication Sciences and Disorders (with UAMS and UCA)

Doctor of Education
Educational Administration
Higher Education

Doctor of Audiology (with UAMS)

Doctor of Education
Educational Administration
Higher Education

Juris Doctor

Education Specialist
Educational Administration
Reading

Post-Master’s Certificates
Conflict Mediation
Gifted Education
Marriage and Family Therapy
Nonprofit Management
Orientation and Mobility of the Blind
Reading/Literacy Coach
Rehabilitation Counseling
Systems Engineering
Teaching Advanced Placement

Master of Applied Psychology

Master of Arts
Art: History, Studio, or Education
Chemistry
College Student Affairs
Criminal Justice
Higher Education: Two-Year College Teaching
Interpersonal and Organizational Communication
Journalism
Liberal Studies
Professional and Technical Writing
Public History
Rehabilitation of the Blind
Rehabilitation Counseling
Second Languages

Master of Business Administration

Master of Education
Adult Education
Counselor Education
Early Childhood Education
Educational Administration and Supervision
Learning Systems Technology
Middle Childhood Education
Reading Education
Secondary Education
Special Education
Teaching the Gifted and Talented

Master of Public Administration

Master of Science
Applied Science
Bioinformatics
Biology
Chemistry
Communicative Disorders
Computer and Information Science
Information Quality
Integrated Science and Mathematics
Management Information Systems
Mathematical Sciences
Speech Pathology (with UAMS)

Master of Social Work

Post-Baccalaureate Certificates
Conflict Mediation
Construction Management
Gerontology
Public Service

Bachelor of Arts
Applied Design (Studio Art)
Anthropology
Art History
Chemistry
Criminal Justice
English
French
German Studies
History
International Studies
Interpretation: ASL/English
Journalism
Liberal Arts
Mathematics
Music
Philosophy
Physics
Political Science
Professional and Technical Writing
Psychology
Radio, Television, and Film
Sociology
Spanish
Speech Communication
Studio Art
Theatre Arts

Bachelor of Business Administration
Advertising/Public Relations
Economics
Finance
International Business
Management
Management Information Systems
Marketing

Bachelor of Science
Accounting
Biology
Chemistry
Computer Science
Construction Management
Electronics and Computer Engineering Technology
Environmental Health Sciences
Geology
Health Sciences
Health Professions
Information Science
Mathematics
Mechanical Engineering Technology
Physics
Speech Pathology (with UAMS)
Systems Engineering

Bachelor of Science in Education
Early Childhood Education
Middle Childhood Education

Bachelor of Social Work

Associate of Arts
General Studies
Interpretation: ASL/English
Law Enforcement

Associate of Science
Computer Programming
Electrical Engineering Technology
Mechanical Engineering Technology
Nursing
<table>
<thead>
<tr>
<th>Four-letter Course Codes</th>
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<tbody>
<tr>
<td>ACCT Accounting</td>
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<tr>
<td>ADED Adult Education</td>
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<td>ADVT Advertising</td>
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<td>AMHU American Humanics: Nonprofit Professional Studies</td>
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<td>AMST American Studies</td>
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<td>ANTH Anthropology</td>
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<td>ARSD Applied Design</td>
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<td>ARST Studio Art</td>
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<td>MUAP Applied Music</td>
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<td>ASCI Applied Science</td>
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<td>ARED Art Education</td>
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<td>ARHA Art History and Appreciation</td>
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<td>ASTR Astronomy</td>
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<td>AUSP Audiology &amp; Speech Pathology</td>
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<td>BIOL Biology</td>
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<td>BSAD Business Administration</td>
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<td>CHEM Chemistry</td>
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<td>CPSC Computer Science</td>
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<td>CNMG Construction Management</td>
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<td>COUN Counseling</td>
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<td>CNSL Counselor Education</td>
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<td>CRJU Criminal Justice</td>
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<td>DANC Dance</td>
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<td>DRPE Drama Performance</td>
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<td>DRTE Technical Theatre</td>
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<td>DRTH Drama Theory</td>
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<td>DRAT Dramatic Arts</td>
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<td>ECED Early Childhood Education</td>
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<td>ERSC Earth Science</td>
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<td>ECON Economics</td>
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<tr>
<td>EDAS Educational Administration &amp; Supervision</td>
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<td>EDFN Educational Foundations</td>
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<td>ECET Electronics &amp; Computer Engineering Technology</td>
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<td>ENGL English</td>
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<td>ENHS Environmental Health Sciences</td>
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<td>FINC Finance</td>
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<td>FNAR Fine Arts</td>
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<td>FREN French</td>
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<td>GNST Gender Studies</td>
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<td>LANG General Foreign Language</td>
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<td>GEOG Geography</td>
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<td>GERM German</td>
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<td>GERO Gerontology</td>
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<td>GATE Gifted &amp; Talented Education</td>
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<tr>
<td>HSCI Health Sciences</td>
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<td>HSAD Health Services Administration</td>
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<td>HIED Higher Education</td>
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<td>HIST History</td>
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<td>IFSC Information Science</td>
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<td>ITEC Information Technology</td>
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<td>IRED Instructional Resources</td>
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<td>IGSC Integrated Science and Mathematics</td>
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<td>INTS International Studies</td>
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<td>INTR Interpreting For The Deaf</td>
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<td>JOUR Journalism</td>
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<td>LAW Law</td>
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<td>LSTE Learning Systems Technology</td>
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<td>LESC Leisure Science</td>
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<td>LIST Liberal Studies</td>
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<td>MGMT Management</td>
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<td>MKTG Marketing</td>
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<td>MATH Mathematics</td>
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<td>ETME Mechanical Engineering Technology</td>
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<td>MCED Middle Childhood Education</td>
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<td>MSCI Military Science</td>
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<td>MUED Music Education</td>
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<td>MUEN Music Ensemble</td>
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<td>MUHL Music History and Literature</td>
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<td>MUPR Music: Private Instruction</td>
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<td>MUTH Music Theory</td>
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<td>NURS Nursing</td>
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<td>PEAW Personal Awareness</td>
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<td>PHIL Philosophy</td>
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<td>POLS Political Science</td>
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<td>PSYC Psychology</td>
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<td>PADM Public Administration</td>
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<tr>
<td>RTVF Radio Television and Film</td>
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<tr>
<td>READ Reading</td>
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<td>RHBL Rehabilitation of the Blind</td>
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<td>RELS Religious Studies</td>
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<td>RHET Rhetoric And Writing</td>
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<td>SCHL Donaghey Scholars</td>
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<td>SCED Secondary Education</td>
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<td>SOWK Social Work</td>
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<td>SOCI Sociology</td>
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<td>SPAN Spanish</td>
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<td>SPED Special Education</td>
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<td>SPCH Speech Communication</td>
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<td>STAT Statistics</td>
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<td>SYEN Systems Engineering</td>
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<tr>
<td>TCED Teacher Education</td>
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<td>TDHH Teaching Deaf and Hard of Hearing Students</td>
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<td>URST Urban Studies</td>
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ADMISSIONS & FINANCIAL AID

The University of Arkansas at Little Rock (UALR)
Office of Admissions and Financial Aid
2801 South University Avenue
Little Rock, AR 72204-1099

ADS 208, (501) 569-3127, (501) 569-8956 (fax)
(800) 482-8892 toll-free (in-state)

http://www.ualr.edu/admissn/

The Office of Admissions and Financial Aid may also be reached by phone at (501) 569-3127. Students who want to enroll at UALR should correspond with the Office of Admissions and Financial Aid as soon as possible because official determination of eligibility can be made only on receipt of official credentials.

After reviewing the appropriate credentials, an admissions officer will classify degree-seeking students as regular or requiring developmental coursework. Nondegree-seeking students will be classified as transient, temporary, or another classification. See “Other Admissions Categories” on page 12.

To ensure that all necessary requirements for admission have been fulfilled before registration, students are urged to submit all transcripts of previous academic work at least 30 days before registration. Transcripts from other institutions of higher education must be sent directly to UALR by the institution.

Admissions Deadlines and Procedures

• Application deadline: the first day of class prior to the beginning of a term for regular admission.
• Supporting credentials deadline: two weeks prior to the beginning of a term for regular admission.

Students unable to provide valid ACT or SAT scores, high school or college transcripts, or GED scores by these deadlines may be admitted provisionally. See the section on provisional admission on the following page.

Students who have 12 or fewer acceptable transfer credits from another college or university must meet all of the admission requirements for entering freshmen. Students with 13 or more acceptable transfer credits must meet the admission requirements listed for transfer students.

There is no application fee.

Entering Freshmen

First-time entering freshmen are persons who have never been enrolled in an institution of higher education. Such applicants must submit:

1. Completed application for admission
2. Official high school transcript or GED scores
3. ACT or SAT scores taken within the previous five years
4. An Arkansas Certificate of Immunization for Institutions of Higher Education (required of all applicants born after January 1, 1957)

Transfer Students

Transfer students are those who have been enrolled previously in a higher institution of learning and have at least 12 transferable college credit hours and a grade point average of at least 2.00 on all previous college work to be granted regular admission. Such applicants must submit:

1. Completed application for admission
2. Official transcript of each college previously attended sent to UALR by the college
3. An Arkansas Certificate of Immunization for Institutions of Higher Education (required of all applicants born after January 1, 1957)

Transfer credit will be evaluated only after a completed application for admission and final transcripts have been received. Only courses with grades of C or greater taken at regionally accredited institutions will transfer to UALR. Only credit hours earned at other institutions will transfer; grades and GPA do not transfer and are not calculated in the student’s GPA earned at UALR. However, all grades from all Universities are calculated for honors.

Transfer students who have been academically suspended from another college or university are not eligible for admission to UALR until they are eligible to return to the previous institution. Courses, including correspondence courses, taken by students while under suspension will not be accepted for credit at UALR. Once suspended students have completed their suspension and are eligible to return to the school from which they were suspended, they may be eligible for admission to UALR. If admitted, they will be placed on academic probation and may not enroll in more than 13 credit hours per term until they have achieved good academic standing.

Transcripts from institutions not accredited by the regional accrediting associations will be handled at the discretion of the Director of Records and Registration. Students presenting such transcripts may be given provisional credit subject to the satisfactory completion of further work at UALR in subjects for which they are asking advanced standing and satisfactory grade point average. However, such transcripts may be refused altogether.

Only official transcripts will be accepted for evaluation. They must include complete records of the courses taken at all other institutions and
be sent to UALR by the institutions. The director may also request that a catalog or bulletin of the years covered by the transcript be presented.

The Transfer Credit Equivalency Guide contains courses accepted in transfer from some other institutions and their equivalencies at the University of Arkansas at Little Rock. It can be found on the web at http://www.ualr.edu/utac/. Students transferring from other Arkansas institutions should see “Transferring Core Courses” on page 26.

Provisional Admission

Students who have not submitted all credentials necessary for admission by the application deadline may be admitted provisionally. In such cases, the student is admitted with the provision that s/he submit the missing admission credentials by the end of the term during which provisional admission was granted. The credentials will be evaluated upon receipt, and the student will be admitted and placed in the appropriate student status, or denied admission.

If evaluation of the records shows that the student does not meet UALR’s minimum requirements for regular student status, the student may be required to reduce the number of courses for which he or she is currently enrolled. For example, the student may be limited to one or two courses if the previous college GPA is below 2.00. Such reductions may occur after the semester has already begun, in which case the student may be required to withdraw from some courses.

Students granted provisional admission who do not submit the missing credentials by the end of the term will not be permitted to enroll in subsequent terms until the admission requirements have been satisfied. Under no circumstances may students admitted provisionally be changed to temporary student status. Students on provisional status are not eligible to receive financial aid and are limited to 15 hours in the fall, spring, or summer semesters.

Criteria for Regular Admission

High School Core Curriculum

The college preparatory core curriculum for Arkansas high school students used in UALR’s freshman admission requirements may be changed by action of the Arkansas state legislature. UALR’s admission requirements apply to the college preparatory core curriculum in place when the student graduates from high school. High school students should work closely with their counselors to be sure to take the appropriate courses.

The transcripts of students who attend high school and apply to UALR will be examined for presence of the college preparatory core curriculum courses. The transcripts of students who attended high school outside of Arkansas will be examined for equivalent courses.

First-time entering freshman students not meeting the necessary requirements may be admitted as described below.

First-time Entering Freshmen

To be eligible for regular admission a student must have earned a grade point average of at least 2.00 on the Arkansas high school core in effect at the time of graduation from high school, and have one of the following:

- A cumulative high school grade point average of 2.5
- An official, passing GED test score
- An ACT composite score of 21 (enhanced) or a combined verbal/math SAT I score of at least 990 (re-centered) taken within the last five years.

Transfer Students

Transfer students must have 12 transferable college credit hours and a grade point average of at least 2.00 on all previous college work to be granted regular admission.

Admission of Students Not Meeting Regular Admission Requirements

Note: The University is not obligated to admit all students who do not meet the requirements for regular admission. If the number of such students applying for consideration to be admitted exceeds space available in the appropriate courses, the University may deny admission until space becomes available.

A student not meeting the criteria for regular admission will be limited to a maximum of 13 credit hours each semester. A credit hour limitation will no longer be imposed once a 2.00 grade point average is achieved. Twelve hours of core courses with a 2.00 grade point average and all required developmental courses must be completed before reaching 42 hours.

Students who were home schooled or completed a GED and have an ACT of 21 or SAT I of 990 will not be subject to the credit hour limitations.

Admission of International Students

See “International Students” on page 17.

Other Admissions Categories

Freshman Early Admission

Students who have completed the 8th, 9th, 10th, or 11th grade will be considered for admission provided they present a junior high or high school transcript indicating a cumulative grade point average of at least 3.00 and an ACT composite score of at least 21 (enhanced) or an SAT I total score of at least 990 (recentered). The test must be taken on a national test date. Additionally, students who have not completed the 11th grade must achieve subscores on the ACT or SAT that meet the minimums necessary to qualify for college-level courses in order to be eligible for admission. The Admissions and Transfer of Credit Committee must approve the admission of these students. A personal interview with the Committee and/or additional testing may be required. Students under 18 years of age must also obtain their parent’s or guardian’s permission to enroll, permission of the high school counselor or principal, and approval of the instructor of the class they plan to attend at UALR.

All students seeking early admission must obtain an advisor through University College prior to enrolling at UALR. Students who qualify may take advantage of this program by:

- Enrollment in a summer term, then returning to junior high or high school
- Enrollment in a summer term or fall semester as a beginning freshman
- Enrollment in a limited number of college-level courses while completing junior high and/or high school.

UALR is not responsible for guaranteeing high school diplomas under this arrangement; however, campus officials will cooperate with state or local school administrators concerning regulations for awarding a diploma to successful participants in this program. All college credit earned under this plan will apply toward a degree at UALR. Students in this category are not eligible for federal aid.

High School Concurrent Enrollment

Under state law UALR may concurrently admit qualified high school students to its academic programs as part-time students. To be eligible for high school concurrent enrollment, the applicant must meet one of the following requirements:

- Complete at least 50% of the state-recommended college preparatory courses with a minimum grade point average of 2.5
- Achieve a minimum overall high school grade point average of 3.0
- Achieve a minimum composite score of 21 on the ACT

Admission under these guidelines does not guarantee that a student may be enrolled in a particular course. Individual university departments may restrict enrollment into specific courses based on the following criteria:

- Acceptable score on a departmentally-approved placement or proficiency test
- Acceptable subscores on the ACT in the specific subject area
- Permission of the department chair or instructor

Prospective students for high school concurrent enrollment must submit a completed UALR undergraduate admission application.
Tuition and other fees for students attending UALR under high school concurrent enrollment are the same as for regular undergraduate students. Students in this category are not eligible for federal aid.

Nonresidents

UALR students are governed by the University of Arkansas Board of Trustees’ policy on student residency status. Those classified as nonresidents of Arkansas must pay higher tuition in addition to regular registration fees. Questions about residency status and requests for the written policy should be directed to the Office of Admissions and Financial Aid.

Postbaccalaureate Students

Students who already have a bachelor’s degree who wish to take additional undergraduate courses are required to submit an official transcript from the institution that granted the degree, proof of immunization, and an application to the Office of Admissions and Financial Aid. Postbaccalaureate students are not eligible for federal grants.

Previously Enrolled Students

Previously enrolled students who have attended another institution since attending UALR must submit an application and an official transcript mailed directly from the other institution(s) attended.

Readmission

Students who have not enrolled at UALR for two years or longer must reapply for admission. Such students who have attended other institutions in the interim should apply as a previous enrolled transfer students.

Students Over Age 60

Any Arkansas resident who is over 60 and has been admitted as a student at UALR shall receive a waiver of all tuition and required fees on a space-available basis. Students qualifying for the waiver will be permitted to register only on the last day of the regular and late registration periods each academic term. If a course section has no available slots and additional students are attempting to register, students receiving the waiver may be removed from that course section. Exceptions may be granted to students who agree to forgo the waiver of tuition and required fees.

Verification of age will be required in the first semester a student qualifies for and accepts the waiver. If the student is degree seeking, transcripts are required from all institutions for transfer work. Students in this category are not eligible for federal aid.

Home-Schooled or GED

Students who were home schooled or completed a GED are eligible for regular admission if they have an ACT of 21 or SAT I of 990. Otherwise they may be admitted subject to credit hour limitations. See “Admission of Students Not Meeting Regular Admission Requirements” on page 12.

Students Whose First Language is Not English

Any applicant for whom English is not the first language must furnish proof of English language proficiency and academic skill proficiency before starting classes at UALR. This includes refugees, immigrants, permanent residents, and citizens.

English proficiency may be demonstrated in one of four ways by all students whose first language is not English, regardless of entry status:

- A score of at least 525 (paper-based) or 197 (computer-based) earned within the last two years on the Test of English as a Foreign Language (TOEFL) and a score of at least 4 points earned within the last two years on the Test of Written English (TWE).
- A score of 85 percent or above on the institutional English language proficiency test administered by the UALR Intensive English Language Program.
- Complete the Intensive English Language Program.
- An ACT score of at least 21 on both the English and Reading sections of the test.

All other admission requirements must be met.

Temporary Students

Temporary status does not require the submission of transcripts or ACT/SAT scores, but students must submit proof of immunization. It is available on a limited basis to students who wish to enroll for one course (four credit hours maximum) per semester to a maximum of eight credit hours. To continue course work beyond the eight-hour maximum, a temporary student must submit a new admissions application to the Office of Admissions and Financial Aid and satisfy all entrance requirements.

Temporary students are not eligible for student financial aid or veterans’ benefits, nor are they eligible to enroll in RHET 1311 Composition I, MATH 1302 College Algebra, or 1315 College Math.

Transient Students

Students enrolled in an institution of higher education to which they intend to return who wish to take courses at UALR must submit a letter of good standing from the institution in which they are enrolled. Transient status is limited to one semester or two summer terms. Further enrollment in this status is not permitted unless the student has returned to his or her original institution or has attended another institution before reapplying. Students in this category are not eligible for federal aid.

Donaghey Scholars Program Admission Information

The Donaghey Scholars Program is an honors program with a separate admissions process. This process uses test scores, written essays, recommendations, and personal interviews to determine whether the student would benefit from admission to the program. Call (501) 569-3389 for more information.
INTERNATIONAL STUDENTS

Alan Lytle, Director International Admissions, (501) 569-3467
Jim Felton, International Student Advisor, (501) 569-3582
Stabler Hall, 105

http://www.ualr.edu/iss/

International Student Services
This office is responsible for foreign student orientation, assists international students regarding living and studying on an American campus, assists with housing, provides advisory services for matters involving nonacademic concerns, and helps develop programs to bring foreign and U.S. students together. The office works in cooperation with other units on campus that deal with international students.

Admission of International Students
International students applying for admission to the University of Arkansas at Little Rock must submit complete credentials and detailed information before being considered for admission. This includes any student classified by the U.S. Citizenship and Immigration Services (USCIS, formerly INS) as A-1, A-2, F-1, F-2, H-1, H-2, H-3, H-4, J-1, J-2, K-1, or K-2.

All required items must be received by UALR by June 1 for the fall semester and October 1 for the spring semester. However, applications will be considered on a case-by-case basis after this date if at least partial documentation has been received. Students transferring from institutions within the United States must have all credentials on file at least one month before registration.

UALR is authorized under federal law to enroll non-immigrant alien students.

Requirements
International applicants must submit:

1. Apply online at http://boss.ualr.edu/
2. Nonrefundable $30 application fee.
3. Academic records: official or certified copies of originals of the applicant’s entire academic record in secondary school, college, or university must be forwarded to the Office of Admissions and Financial Aid with an English translation of these documents. Any high school or transfer student must have a C average or greater to be considered for admission. International students are not admitted on academic probation.
4. Proof of English proficiency; each applicant must demonstrate proficiency in English in one of these ways:
   • Present a score of at least 525 (paper-based), 197 (computer-based), or 71 (IBT) earned within the last two years on the Test of English as a Foreign Language (TOEFL) and a score of at least 4 points earned within the last two years on the Test of Written English (TWE).
   • Take the institutional English language proficiency test, administered on campus. Please contact the Intensive English Language Program for specific information; the test must be taken before class registration.

5. Financial statement (F and J visas only): students must provide certified proof that they are financially capable of pursuing an education in this country. The estimated cost for books, fees, and living expenses will be approximately $19,000 in U.S. currency each year of study at UALR. Fees are due at the beginning of each semester.

Additional Admission Requirements for International Transfer Students
1. Students transferring from another institution within the United States must submit a Transfer and Visa Form completed by the applicant and by the foreign student advisor of the institution the applicant is currently attending. The form is included in the application packet. SEVIS file must also be transferred electronically by the previous institution to UALR.
2. Transfer students must fulfill the English proficiency requirement stated in Requirement 4 of the previous section.
3. Students transferring 12 or fewer credit hours will be required upon arrival on campus to take the Basic Skills Test for academic placement purposes.
4. Students transferring fewer than 12 hours must provide secondary school academic records in addition to their previous college or university transcript. Those transferring 12 hours or more need only submit a college transcript.
5. Transfer students must have a cumulative GPA of at least 2.00 from their previous college or university to be considered.

Requirements upon Arrival at UALR for International Students
1. Assessment of new freshmen for academic placement: All first-time entering freshman students who have not taken the ACT or SAT will be required (upon arrival on campus) to be further assessed for academic placement purposes by taking the UALR Basic Skills Test.
2. Health and accident insurance: Students will be required to purchase insurance provided by UALR. All international students are required to maintain insurance coverage year-round. See “Health and Accident Insurance” on page 26.
3. Complete the TB screening, unless exempt
4. Provide a copy of the visa to the immigration official.
Employment Information

U.S. immigration laws permit international students to work only on campus for the first year. After one year, a student may request permission to work off campus. Permission to work off campus is granted only in extreme cases.

<table>
<thead>
<tr>
<th>International Student Tuition and Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonresident Tuition</strong></td>
</tr>
<tr>
<td>College of Business Courses</td>
</tr>
<tr>
<td>Courses in Other Colleges</td>
</tr>
<tr>
<td><strong>Required Fees</strong></td>
</tr>
<tr>
<td>General Fee</td>
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<tr>
<td>Athletic Fee</td>
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<tr>
<td><strong>College Technology Fees:</strong></td>
</tr>
<tr>
<td>Arts, Humanities and Social Sciences Courses</td>
</tr>
<tr>
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<tr>
<td>Science and Mathematics Courses</td>
</tr>
<tr>
<td>Off-Campus Courses (includes web-based courses)</td>
</tr>
</tbody>
</table>

| Other Miscellaneous Fees               |
| International Student Application Fee  | $30.00           |
| International Student Service Fee (per term) | $85.00           |
| Health Insurance (per 6 months)²       | $444.00          |

| IELP Facilities Fee                    |
| Student (per IELP term)                | $20.00           |
| Family (per IELP term)                 | $40.00           |

| Residence Hall                         |
| Housing Application Fee                 | $35.00           |
| Housing Security Deposit                | $100.00          |
| Fall and Spring Semesters (per term)    |
| Double Bedroom                          | $1,550.00        |
| Single Bedroom                          | $2,170.00        |
| Laundry Fee                             | $30.00           |
| Summer (per five-week term)             |
| Double Bedroom                          | $410.00          |
| Single Bedroom                          | $599.00          |
| Laundry Fee                             | $10.00           |
| Residence Hall Programming Fee          |
| Fall and Spring (per term)              | $16.00           |
| Summer (per term)                       | $6.00            |
| UALR-owned Houses and Apartments        |
| Price per month                         | $200 – $660      |

a. See “Nonresidents” on page 15.
b. Rate subject to change. See “Health and Accident Insurance” on page 26.
c. Depending on size, furnishings, and condition.

English as a Second Language (ESL)

Credit and non-credit courses in ESL are offered during the fall, spring, and summer sessions. Intensive English classes focus on preparation for university study. Placement testing for the three-level intensive English program is held at the beginning of each semester.¹ Testing is also available for international students who require language clearance before registering for UALR classes.

Students Whose First Language is Not English

Any applicant for whom English is not the first language must furnish proof of English language proficiency and academic skill proficiency before starting classes at UALR. This includes refugees, immigrants, permanent residents, and citizens.

English proficiency may be demonstrated in one of four ways by all students whose first language is not English, regardless of entry status:

- A score of at least 525 (paper-based), 197 (computer-based), or 71 (iBT) earned within the last two years on the Test of English as a Foreign Language (TOEFL) and a score of at least 4 points earned within the last two years on the Test of Written English (TWE).
- A score of 85 percent or above on the institutional English language proficiency test administered by the UALR Intensive English Language Program.
- Complete the Intensive English Language Program.
- An ACT score of at least 21 on both the English and Reading sections of the test.

Intensive English Language Program

Alan Lytle, coordinator.

http://www.ualr.edu/ielp/

The Intensive English Language Program (IELP) offers non-English speakers a full-time program in English language skills: speaking, listening, reading, and writing. After completing IELP, students with the necessary academic qualifications may be admitted to UALR without taking the Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE), or the Michigan test.

Conditional admission to UALR may be granted to IELP students with acceptable secondary school, college, or university grades.

IELP provides language training as well as cultural and academic orientation programs for the following students:

- International undergraduate or graduate students applying for admission to a U.S. college or university who must first improve their language skills.
- International undergraduate or graduate students who have been admitted to UALR but require further language preparation.
- Community residents who want to improve their English language skills for personal or professional purposes.

IELP Objectives

- To help students improve the speaking, listening, reading, and writing skills that will enable them to successfully undertake work in regular university classes.
- To enable students to participate actively in most conversational situations.
- To introduce students to American culture in terms of a typical U.S. campus and community.
- To foster international and intercultural awareness and understanding.

Eligibility

Students 17 years of age or older are eligible for admission to IELP. No prior knowledge of English is necessary. Foreign students must provide documentation to establish their ability to support themselves while in the U.S.

Visa Requirements

Every IELP student must follow standard U.S. Immigration and Naturalization Service procedures for entry into the U.S.

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¹ The TOEFL requirement for international applicants to UALR is waived for those who complete the final (Pre-university/TOEFL) level. See “Intensive English Language Program” on page 15.
A student planning to study in the U.S. must obtain an F-1 visa. UALR is authorized to issue a Certificate of Student Eligibility (I-20) to eligible students. Students with the F-1 visa must remain full-time students to maintain F-1 status.

Application and Admission

The student should initiate the application process at least three months before planning to enter UALR. To apply:
1. Complete and submit the IELP application form.
2. Submit supporting financial data (data must be verified by a bank stamp or the local U.S. Embassy or Consulate).
3. Send a U.S. $100 bank draft or money order as a nonrefundable application fee. An I-20 will be sent to qualified applicants. Please allow one month for return.

Instruction

Students receive intensive English instruction at the appropriate level of difficulty.
- Placement: Upon arrival, students are placed in the appropriate level on the basis of diagnostic tests.
- Levels: The IELP offers three levels of instruction: Foundations, Intermediate, and Pre-university/TOEFL.
- Classes: Each student has at least 20 hours of instruction per week; every student works to acquire grammar, pronunciation, culture, reading, writing, listening, speaking, and study skills. TOEFL preparation is offered at the highest level.
- There are three semesters of instruction each year; each term is approximately fifteen weeks in length. Students may progress from foundations to the pre-university/TOEFL level in one year. However, determination and diligence determine how quickly an individual advances to the next level.

Tuition

Students should contact the IELP for up-to-date information on costs for tuition, housing and food, books, medical insurance, and other fees.

Working While at IELP

IELP Students are not allowed to work while they are studying at IELP. Once an IELP student graduates from the program, he/she might be able to work on campus, but the student must talk with the UALR immigration official first.

International Educational Exchange and Study Abroad

Sherrie Ray, coordinator.

The University provides opportunities for students and faculty to go abroad for professional and other learning purposes. Linkages with foreign universities facilitate exchanges in both directions.

UALR students have studied abroad in programs offered directly under UALR's aegis. Other students have arranged to spend a semester or year in a foreign university or have undertaken an internship abroad. The Department of International and Second Language Studies maintains files of information on a variety of opportunities for study, work and travel options.

Individual Program Abroad Policy

All individual programs abroad must be approved by the UALR Programs Abroad Office prior to course enrollment in the foreign program. UALR credit will not be granted otherwise. UALR has the right to adjust both the level and number of UALR credits given for courses taken in foreign programs based on placement examinations given by the foreign program.

Study Abroad Programs

Sherrie Ray, coordinator.

Study abroad programs provide students with opportunities to explore other cultures through classroom and field experiences while visiting a foreign country, develop proficiency in a foreign language in a context where it must be used daily, and draw upon the vast cultural, intellectual, and historical resources of that location. The University coordinates study abroad programs in Austria, France, Mexico, and Spain. For more information, contact the Department of International and Second Language Studies at (501) 569-3576 or (501) 569-3272.
Tuition and fee information is accurate as of the time of publication. For the most current tuition and fee information, visit http://financialservices.ualr.edu/tuition.html. Tuition and fee charges for classes that are taken for audit are the same as those for credit classes.

Other fees for seminars and special courses may be charged. All fees are subject to change without notice. All tuition and fees are due at the time of the student’s registration. UALR accepts MasterCard, Visa, and Discover. Students whose tuition checks are returned are subject to administrative withdrawal.

Any student who is an Arkansas resident and has reached the age of 60 years or older by the last day of registration may enroll (on a space-available basis) free of tuition. In such cases, special fees for certain leisure science and music instruction courses are required. Students must provide proof of age to the Office of Admissions and Financial Aid.

**Undergraduate Tuition (per credit hour)**

<table>
<thead>
<tr>
<th>Arkansas Residents</th>
<th>Nonresidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Business Courses</td>
<td>$152.25 per hour</td>
</tr>
<tr>
<td>Courses in Other Colleges</td>
<td>$148.00 per hour</td>
</tr>
<tr>
<td>College of Business Courses</td>
<td>$400.00 per hour</td>
</tr>
<tr>
<td>Courses in Other Colleges</td>
<td>$388.50 per hour</td>
</tr>
</tbody>
</table>

**Withdrawal from UALR**

Students voluntarily withdrawing from UALR must complete the University Withdrawal Form and have an exit interview with a staff member in the Office of Admissions and 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” on page ix, and on the UALR web site. Students who fail to officially withdraw will be reported as having failed the course work for the semester, and grades of F will appear on their official transcripts. Students who have questions about withdrawing should contact the Office of Records and Registration.

Students who officially withdraw from UALR (withdrawal from all classes) during a regular fall or spring semester are entitled to a refund of instructional fees in accordance with the following schedule:

- 1st class day through the 5th class day – 100%
- 6th class day through the 10th class day – 50%
- After the 10th class day – None

To avoid charges for a summer term, a registered student must officially withdraw from all classes prior to the first day of classes for that term.

Refund schedules for current terms may be found in the UALR Registration Guide and Class Schedule.

**Fees for All Students (per credit hour)**

<table>
<thead>
<tr>
<th>Required Fees:</th>
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</thead>
<tbody>
<tr>
<td>General Fee</td>
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<tr>
<td>Athletic Fee</td>
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<table>
<thead>
<tr>
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<tr>
<td>Off-Campus Courses (includes web based courses)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special Fees (as applicable):</th>
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</thead>
<tbody>
<tr>
<td>Campus ID Card Replacement</td>
</tr>
<tr>
<td>Installment Payment Plan Fee</td>
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<tr>
<td>Late Installment Payment Plan Fee</td>
</tr>
<tr>
<td>Late Installment Payment Fee (per payment)</td>
</tr>
<tr>
<td>Late Payment Fee (depending on date)</td>
</tr>
<tr>
<td>Late Registration</td>
</tr>
<tr>
<td>Returned Check Fee</td>
</tr>
<tr>
<td>International Student Application Fee</td>
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<tr>
<td>International Student Service Fee (per term)</td>
</tr>
<tr>
<td>Optional Individual Math Skills Review</td>
</tr>
<tr>
<td>Transcript Fee</td>
</tr>
<tr>
<td>Library Non-student User Circulation Fee</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Specific Fees:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiology/Speech Pathology Practicum</td>
</tr>
<tr>
<td>Education Field Placement (per semester)</td>
</tr>
</tbody>
</table>

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.
# Fees for All Students (per credit hour)

<table>
<thead>
<tr>
<th>Fee</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Teacher Practicum Supervision</td>
<td></td>
</tr>
<tr>
<td>In-state</td>
<td>$210.00</td>
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<tr>
<td>Out-of-state</td>
<td>$315.00</td>
</tr>
<tr>
<td>Music Private Applied Instruction</td>
<td></td>
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<tr>
<td>half-hour lesson (1 credit hour course)</td>
<td>$60.00</td>
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<tr>
<td>one hour lesson (2 to 4 credit hour course)</td>
<td>$100.00</td>
</tr>
<tr>
<td>Art Studio Materials Fee</td>
<td>$12.00</td>
</tr>
<tr>
<td>Nursing Testing</td>
<td>$25.00</td>
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<tr>
<td>Performing Arts Production Fee</td>
<td>$12.00</td>
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</tbody>
</table>

# Facilities Fees

<table>
<thead>
<tr>
<th>Fee</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>Residence Hall</td>
<td></td>
</tr>
<tr>
<td>Housing Application Fee</td>
<td>$35.00</td>
</tr>
<tr>
<td>Housing Security Deposit</td>
<td>$100.00</td>
</tr>
<tr>
<td>Fall and Spring Semesters (per term)</td>
<td></td>
</tr>
<tr>
<td>Double Bedroom</td>
<td>$1,550.00</td>
</tr>
<tr>
<td>Single Bedroom</td>
<td>$2,170.00</td>
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<tr>
<td>Laundry Fee</td>
<td>$30.00</td>
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<td>Summer (per five-week term)</td>
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<tr>
<td>Double Bedroom</td>
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<td>Laundry Fee</td>
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<tr>
<td>Fall and Spring (per term)</td>
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<td>Summer (per term)</td>
<td>$6.00</td>
</tr>
<tr>
<td>UALR-owned Houses and Apartments</td>
<td></td>
</tr>
<tr>
<td>Price per month(^a)</td>
<td>$200 – $660</td>
</tr>
</tbody>
</table>

\(a\) Depending on size, furnishings, and condition.

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**Schedule Adjustment**

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

**Parking**

Every student who parks a motorized vehicle on the main UALR campus is required to register 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, $10 for spring semester only, and $7 for one or both summer terms.

Reserved parking lots are also available to students. Fees for these lots are $120 per year, $60 for evenings only. Only persons holding a key-card are able to enter the lots. Reserved parking may be arranged at the Department of Public Safety. Fees for the parking deck are $.50 per exit, or $.40 per exit when paid by Campus Card.

**Tax-Deductible Educational Expenses**

The cost of college educational expenses may be deductible on an individual’s federal income tax return if classes are taken:

- To maintain or improve the skills required in the individual’s trade or business, or required in performing a present job
- To meet the specific requirements of an employer or the requirements of law for retention of present employment, salary, or status
- Such that the criteria for the Hope Scholarship Credit or the Lifetime Learning Credit are met

These credits can be applied to tax returns if the student meets the eligibility requirements.

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

**Concurrent Enrollment**

High school students see “High School Concurrent Enrollment” on page 14.

Concurrent enrollment is permitted, subject to the approval of the appropriate academic advisors.\(^1\) Students are only eligible to receive financial aid funding from their primary institution.

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\(^1\) A student should obtain a Special Exception form for this purpose in the Office of Records and Registration.
The University of Arkansas at Little Rock (UALR) maintains a comprehensive program of financial assistance for students, including loans, grants, part-time employment, and scholarships.

To be eligible for any form of financial aid, a student must be accepted for admission with an eligible admission status and be enrolled at UALR as a degree-seeking student. Students who wish to apply for financial assistance must complete the Free Application for Federal Student Financial Aid (FAFSA) each year. Students may apply online at http://www.fafsa.ed.gov/. Applications are available in January of each year and students are encouraged to apply early.

Additional financial aid information can be obtained by calling (501) 569-3035 or by writing to:

**STUDENT AID & SCHOLARSHIPS**

The University of Arkansas at Little Rock (UALR)
Office of Admissions and Financial Aid
2801 South University Avenue
Little Rock, AR 72204-1099

ADS 208, (501) 569-3035, (501) 569-8956 (fax)
(800) 482-8892 toll-free (in-state)

The majority of the financial aid available at UALR is provided by the federal government. The State of Arkansas also provides student aid, as do UALR and its contributors.

### Federal Aid

The U.S. Department of Education provides funding for grants, student loans, scholarships, and employment. Most awards are based on financial need; some are based on merit. Federal student aid includes the Federal Pell Grant, Federal Stafford Loans, Federal Parent Loan for Undergraduate Students, Federal Supplemental Educational Opportunity Grants, Federal Work Study, and various scholarship awards.

### State Aid

The Arkansas Department of Higher Education provides loans, grants, and scholarships to Arkansas residents enrolled at UALR. Award criteria include financial need, academic achievement, and/or study of specific subjects. For more information, students should call (800) 54-STUDY or contact:

The Arkansas Department of Higher Education
114 East Capitol Avenue
Little Rock, AR 72201

### Private Aid

UALR offers scholarships and grants-in-aid provided by institutional and departmental funds, private foundations, corporations, and individuals. Eligibility requirements vary. Criteria for different scholarships include academic achievement, demonstrated talent or ability, a specific major or student classification, university or community involvement, and/or financial need. Some scholarships are available for part-time students.

The deadline to apply for UALR scholarships is March 1 for the coming academic year. Contact the Office of Development for the handbook of UALR Private Scholarships. This includes the names and necessary qualifications for a number of scholarships. Students must also complete a current Free Application for Student Aid (FAFSA) to apply for UALR private scholarships. For Entering Freshman and Shelby Bredelove (two-year college graduate) Scholarships contact the Office of Admissions and Financial Aid. See “Academic Policies & Requirements” on page 25 for specific academic or talent awards and scholarships, or contact the appropriate department. Areas in which scholarships are offered include athletics, chemistry, education, English, fine arts, geography, history, journalism, School of Law, marketing, military science, music, nursing, political science, psychology, rehabilitation of the blind, School of Social Work, speech, and theatre.

### Scholarships for Freshmen

UALR offers a number of full-tuition scholarships. Chancellor’s Leadership Corps Scholarships are awarded to freshmen who have demonstrated outstanding leadership capability in high school activities. Donaghey Scholars Program Scholarships are most often awarded to high school seniors with exceptional academic promise. See “Academic Policies & Requirements” on page 25.

CyberScholar scholarships are awarded to outstanding entering students in Computer Science, Information Science, and Systems Engineering. EAST Scholarships are available to selected students who participated in the EAST Program in high school.

Entering Freshman Scholarships are awarded to selected high school seniors who meet the March 1 deadline, have a minimum 3.25 GPA, and at least an ACT score of 24, based on availability of funds. There are also scholarships available to students transferring from Arkansas public junior and community colleges. Applications and further information for these scholarships are available from the Office of Admissions and Financial Aid.

### Veterans Benefits

The U.S. Department of Veteran’s Affairs provides basic programs for veterans and service persons seeking assistance for education or training. Veterans and service persons who entered the military from January 1, 1977 through June 30, 1985 may receive educational assistance under the Veterans’ Educational Assistance Program (VEAP) contributory plan. Individuals entering on active duty after June 30, 1985 may receive benefits under the Montgomery GI Bill contributory plan. Another educational entitlement program, referred to as the Montgomery GI Bill Selected Reserve, is available for members of the Selected Reserve, including the National Guard.

The noncontributory GI Bill ended on December 31, 1989. No benefits are payable for any training pursued on or after January 1, 1990 under this bill.

Monthly educational assistance benefits are based on the number of hours of enrollment. Full-time enrollment for undergraduate student during fall and spring terms 12 hours or more; three-quarter enrollment is 9 to 11 hours; half-time enrollment is 6 to 8 hours. For fewer than six hours only tuition and fees are reimbursed, except in the case of the MGIB for
Selected Reserve/National Guard (Chapter 1606), these benefits are based on one-fourth of the full-time amount. Full-time enrollment for graduate students during fall and spring terms is 9 hours or more; three-quarters enrollment is 6 to 8 hours; half-time enrollment is 3 to 5 hours. Summer benefits for both graduate and undergraduate students are based on the number of hours enrolled and the number of weeks in the term.

There are Survivors/Dependents benefits for eligible persons. For further information contact the VA Regional Office at (800) 827-1000.

Other services available under the Veteran’s Affairs educational benefits include tutorial assistance, educational loans, and work-study.

All eligible persons wishing to apply for Veteran’s Affairs educational benefits should contact the Office of Admissions and Financial Aid.

Students classified as temporary or provisional are eligible to receive Veteran’s Education benefits for one semester.

Cooperative Education

Cooperative Education affords students the opportunity to learn beyond the classroom, earn a competitive wage, gain relevant experience, and earn college credit in their field of study. Students must be juniors or seniors. They may participate in a parallel experience that requires 20 to 25 hours per week, or an alternating experience that requires 30 to 40 hours per week. Students wishing to apply should contact the Office of Cooperative Education at (501) 569-3584 or visit Ross Hall 417.

Private Scholarships and Awards

The Office of Development publishes a comprehensive list of private scholarships and awards available to all students. Additional information as well as applications can be obtained by contacting the Office of Development at (501) 569-3194.

Applying for Nationally Recognized Scholarships and Fellowships

UALR offers considerable support and assistance to undergraduate students seeking scholarships for graduate study. The University has had recent winners in the Truman, Rhodes, and Mellon competitions, and has had many students win other prestigious national awards and scholarships. Students are encouraged to aim high in their scholarship goals, and take advantage of the assistance and advice that professors at UALR can offer.

As applications for the more prestigious scholarships often must be made while the student is still an undergraduate, students are encouraged to think ahead and start work on the application process at the earliest possible time. Commencing research on scholarship possibilities during the freshman year is not too early.

Students should visit http://www.ualr.edu/fellowships/ for further information on the Truman Scholarship, Rhodes Scholarship, Marshall Scholarship, James Madison Fellowship, National Security Education Scholarship, Udall, and Goldwater Scholarships (which fund undergraduate study).

The web site includes for each scholarship a statement of the purpose for which the sponsoring institution is underwriting the funding; an overview of the eligibility requirements; some remarks on important features of the written application; a description of the application process and summary of deadlines; and the person on campus to contact for further information.

Interested students should inquire early. Call (501) 569-8399, for general information or a referral to the appropriate scholarship advisor.
Educational and Student Services

The vice chancellor for educational and student services has the general responsibility for coordinating services to students. These services include admissions, academic advising, academic records, the UALR Bookstore, cooperative education, counseling and career planning, dining services, disability support services, fitness and aquatics, health services, housing, personal enrichment courses, intramural and recreational activities, orientation programs, registration, student activities, and testing services and student life research. The vice chancellor for educational and student services also serves as dean of University College.

Adult Learners (Nontraditional Students)

Adult learner is defined as a student 25 years of age or older who is beginning or returning to school after being away from college for a number of years and who plans to enroll in credit courses.

To respond more effectively to this group’s needs, the Office of Campus Life serves as an advocacy and referral office and assists new adult students.

Support for adult learners includes help with questions, peer support, and opportunities to enhance a positive sense of self. Special interest sessions for adult learners are also provided, and advising is offered to organizations targeting adult learners. For more information about these services and programs, contact the Office of Campus Life.

Alumni Association

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

Share America Program

The Share America Program at UALR was established in 1994 and provides more than 1700 children in the Little Rock Public Schools with educational enrichment, health care, family assistance, and special gifts. The program, which was the first Share America site in the United States, was established by a grant from Children International, a Kansas City-based child sponsorship organization. Share America serves as a learning laboratory for UALR students who volunteer for one-time service projects or serve as mentors and tutors. Share America welcomes the opportunity to arrange internships and course credit for students involved in special projects.

Bookstore

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

Campus ID Card

The UALR photo Campus Card is required to access the Donaghey Student Center Fitness and Aquatics Center, library, athletic events, and special activities, and to perform check cashing and enrollment adjustments. The ID Card is also used as a debit card for those receiving book vouchers. The card may not be used by any person other than the one to whom it is issued, and it must be surrendered on the request of any official of the University. If an ID card is lost, another can be obtained at the Donaghey Student Center for a fee. Campus Cards are issued at the Donaghey Student Center during regular operating hours.

Office of Campus Life

The professional staff members in the Office of Campus Life are dedicated to the development of the whole student, believing that the best way to educate people is to integrate fully all objectives of learning.

The Office of Campus Life has primary responsibility for new student orientation and programs, advocacy programs for women, adults and minorities, campus celebrations, social Greek life advisement, registration and advisement of student organizations, allocation and administration of the student activity fee, peer tutoring services, and administrative support for registered student organizations. For more information regarding the above programs and services, contact the Office of Campus Life.

Chancellor’s Leadership Corps

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

Cooperative Education

Cooperative Education is an academic program for students who would like to combine classroom study with academically related paid employment. The program allows students to complement classroom experience with employment related to their academic area of interest. “Co-op” creates opportunities for students locally in business, government, industry, and social service agencies. Students who participate in co-op find themselves refining research methods, applying theories in actual field settings, working with advanced technology, and designing original projects and research, all while gaining experience, making money, and earning their degrees.

Students interested in Cooperative Education should contact the Office of Cooperative Education at (501) 569-3584. For additional information, visit the Co-op web site at http://www.ualr.edu/coopeduc/.

Counseling and Career Planning Services

UALR’s Office of Counseling and Career Planning offers assistance in personal counseling, career and educational planning, and the job search. Individual appointments with a counselor are available to facilitate progress toward life goals and to help overcome problems. The office also has many tools to help students in their career goals, from interest finders and occupational information to job listings. All students are invited to visit the office, in Ross Hall 417, to take advantage of the many resources it offers. For all additional assistance and information, please visit UALR's Counseling and Career Planning web site at http://www.ualr.edu/ccpsdept/.

Disability Support Services

It is the policy of UALR to accommodate students with disabilities including, but not limited to, physical, sensory, learning, psychiatric, and medical disabilities, pursuant to federal and state law. Any such student who needs accommodation, for example in seating placement, or in arrangements for note-taking, examinations, or access to information on the web, should inform the instructor at the beginning of the course. The chair of the department offering the course is also available to assist with accommodations.

Other services available to students with disabilities include specialized orientation to the campus, assistance with course registration, assistance with class schedule preparation, special parking permits (visit Health Services), reader and interpreter services, adaptive equipment, and disability-related counseling. Disability Support Services also facilitates classroom and testing accommodations provided by faculty.

Disability Support Services currently has two U.S. Department of Education grant-funded programs. Project PEC is funded through a contract with the Postsecondary Education Consortium at the University of Tennessee. Funds have been used for development of model programs as well as outreach to the state in the area of serving students who are deaf or hard of hearing. Project PACE focuses on providing information and training to faculty and administrators on how best to teach of students with disabilities. To reach Project PACE, call (501) 569-8410.

For more information, contact Disability Support Services by visiting http://www.ualr.edu/dssdept/ or call (501) 569-3143. The office is located in the Donaghey Student Center, room 103.

Donaghey Scholars Program

Donaghey Scholars participate in an honors program designed to promote academic achievement and student development. Scholars are selected on the basis of academic record in high school and college (if applicable), standard test scores, written essays, recommendations, and interviews. Scholars who perform satisfactorily in the program are assured of up to four years of support. Support for Arkansas residents entails remission of tuition and fees, a stipend each fall and spring semester, and a generous allowance toward expenses. Nonresident students admitted into the Scholars Program receive in-state tuition and fees, and the stipend each fall and spring semester. For more information, contact the Scholars Program at (501) 569-3389.

Donaghey Student Center

The 180,000 square foot multifunction Donaghey Student Center complex is guided by a three-part mission: to establish a climate that nurtures personal wellness and encourages individuals to be positive contributors to society; to support the mission of the University by providing a diversity of facilities, programs, and services to enhance the educational environment and improve the quality of college life; and to be a place of convergence that provides a sense of campus community and linkage to the University’s public.

The Donaghey Student Center houses the Bookstore, dining services, the Career and Educational Services, Support Services, and Office of Disability Support Services, Health Services, Leisure Science, Campus Life, and the facility’s administrative offices. There are also offices for the Student Government Association, UALR Forum, University Program Council, and over 40 student organizations.

The contemporary complex features full dining services, catering and conference facilities and services, meeting and banquet rooms, a food court with national franchises, a TV lounge, cyber cafe, and other facilities and conveniences to serve the needs of the campus community.

The fitness and aquatics section of the Donaghey Student Center showcases an Olympic-sized pool; a weight room with variable resistance machines and free-weights; cardiovascular training equipment including stair steppers and exercise bikes; basketball, volleyball, wallyball and racquetball courts; a one-eighth mile running track; steam rooms and saunas; and more.

Students, faculty, and staff may access these facilities with a valid Campus Card (student ID). Family members may also join for a nominal fee. A variety of sports equipment, e.g., basketballs and racquets, are available at no charge at the equipment services counter. Locker and towel service is available at a nominal fee.

Many programs are available, including fitness, aquatic, intramural sports, and recreation and leisure activities. Services include land and water aerobic classes, strength training and conditioning assistance, fitness screenings, weight control seminars, and intramural tournaments in basketball, volleyball, golf, and more.

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

Educational Talent Search

UALR and the United States Department of Education cosponsor an Educational Talent Search Program designed to:

- Identify qualified youths of financial or cultural need with an exceptional potential for postsecondary educational training
- Publicize existing forms of student financial aid
- Encourage secondary school or college dropouts of demonstrated aptitude to re-enter educational programs, including postsecondary school programs

The program encourages such individuals to complete secondary school and undertake postsecondary educational training. Youths who have delayed entering college are especially recruited for this program.

The program operates in 44 counties in southeast, southwest, and central Arkansas. Services available include financial aid, admission assistance, career planning, counseling, and other support services as required.

There is no charge to eligible students for any service in this program. Eligible students are U.S. citizens or permanent residents 14 to 27 years of age, veterans of any age, and students with exceptional academic potential with financial or cultural need. Students may be referred to UALR Educational Talent Search for an application.

Fraternities and Sororities

UALR hosts chapters of fraternities and sororities, self-supporting groups of undergraduate members. Fraternities and sororities provide democratic, social, and leadership experiences; create an ever-widening circle of service beyond membership; answer the yearning for spiritual expression and guidance; and fulfill the need to belong. Their purposes and objectives are compatible with the mission of the University and its purposes of student education and training. For more information, contact the Office of Campus Life.

Health and Accident Insurance

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

The Office of Health Services is located in the Donaghey Student Center, and is staffed by nurses Monday through Friday (the Department of Public Safety will respond to an emergency 24 hours a day). Readily accessible health information, screening programs, immunizations, assessment and medication for common illnesses, first aid, and medical referrals are provided to enable students to take full advantage of academic opportunities.

Health service programs are free and available to all students. However, students may be referred to a physician or local health care facility for definitive care and are responsible for these medical expenses. Staff can provide follow-up care such as blood pressure checks, dressing changes, and weight management information.

Physical examinations are not required of UALR students, but proof of immunization for measles and rubella is required of all applicants born after January 1, 1957. Students with medical problems or physical disabilities are encouraged to fill out a brief information card at the Office of Health Services by the end of the first week of classes. All patient information is confidential.

Housing

The University offers a variety of housing services coordinated by the Office of Student Housing. Services include a residence hall, University-owned houses and apartments, and housing and roommate referral.

The residence hall houses 306 students, with controlled security-card access and a 24-hour staffed reception desk. Each two-bedroom suite accommodates four students and includes a bath and kitchenette. Cable television service and computer access is provided in every student room. Telephone service is available in every student room for a nominal fee. The hall provides a computer lab, study and television lounges, recreation room, mail service, and laundry and vending machines.

UALR owns a limited number of apartments and houses that are available to students, faculty, and staff. These accommodations are unfurnished, of various sizes and types, and within walking distance of the campus.

The office maintains a list of persons seeking roommates and of apartments, townhouses, duplexes, rooms, and mobile homes available in greater Little Rock, as well as apartment guides, commercial and private listings, brochures, and other information. All rental arrangements on privately owned accommodations are between the renter and tenant.

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

Information Center

The Information Center is located in the Donaghey Student Center. The Center keeps a list of office locations for faculty, departments, and colleges and maintains a master calendar of campus activities. Students can request meeting rooms on forms available at the center. Facility reservation forms are also available from the University’s Central Stores. The Information Center’s telephone number is (501) 569-3362.

Intercollegiate Athletics

The UALR men’s athletic program is a member of the National Collegiate Athletic Association Division I and abides by NCAA rules and regulations. Men’s and women’s teams compete in the Sun Belt Conference. Men’s sports include baseball, basketball, cross country, tennis, and water polo. Women’s sports include basketball, cross country, soccer, swimming, tennis, track, and volleyball. Any student interested in intercollegiate sports participation is encouraged to try out. Interested students should contact the director of athletics.

International Student Services

See “International Students” on page 17.

Intramural-Recreation Services

Intramural-recreation services are offered by the Donaghey Student Center. Services offered include open recreation, fitness, aquatics, intramural sports, outdoor recreation, instructional sports, and club sports.

Intramural sports programs include flag football, swimming, volleyball, basketball, tennis, golf, table tennis, and more. There are also workshops to assist students in sharpening their skills in some sports and other leisure pursuits. These include land and water aerobic classes, swimming lessons, and special fitness events. Students may also get a fitness assessment and guidance from the fitness and wellness staff. Strength training and conditioning assistance is always available in the weight room. This office also serves the facility and programming needs of recognized student organizations that are sports or recreation related. For more information call (501) 569-8284.

New Student Orientation

Orientation is a process that begins before admission and lasts throughout a student’s relationship with the institution. Orientation programs provide experiences that foster awareness, growth, and responsibility on the part of students and help them adapt to University life. New students are encouraged to attend the structured orientation programs scheduled each summer. The dates for these programs are published by the Office of Campus Life each year. Newly admitted students will be notified when orientation sessions are scheduled. Additionally, a web-based orientation is available at http://www.ualr.edu/orientation/. For more information, contact the Office of Campus Life.

Orientation Leaders

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

Ottenheimer Library

The library plays a key role in every student’s education. Students are urged to visit the library early and often in their academic careers. The library staff provides a number of reader’s services, including information about the automated card catalog, special collections, reference materials, and internet resources.

The UALR Ottenheimer Library is an open-stack library, which means patrons may select the book they want instead of waiting for a staff member to retrieve it. However, that puts a special obligation on users to act responsibly by not taking more than they need and by not taking books without checking them out.

Ottenheimer Library meets a variety of student, faculty, and general public needs. Over 2,300 people use the library on an average day.

The library’s staff provides circulation services, access to assigned readings in the Baum Reserve Reading Room, interlibrary loans, and reference assistance. Reference librarians also conduct course-specific instruction sessions and assist students accessing information through the library’s on-line catalog, in-house databases, and the internet.

The library holds more than 480,000 volumes and subscribes to about 2,000 periodicals, and access to more than 20,000 electronic journals. The library also subscribes to more than 100 electronic databases. In addition, it houses a microform inventory of nearly one million items along with over 10,000 phonograph albums, audio books, and music compact disks. As a selective depository for federal documents, the library receives about 30 percent of the items offered by the Government Printing Office in Washington, D.C. Ottenheimer Library is the state’s only depository of European Union documents and also collects Arkansas state documents. Overall, the library contains more than 300,000 government documents. The Archives and Special Collections highlights materials specific to UALR, Arkansas, and the lower Mississippi Valley.

Individual study carrels and self-service photocopiers are available for faculty and student use. Along with microfilm reader-printers, the Instructional Media Services area provides equipment for visually-impaired students. This includes a Braille dictionary, close-captioned television, and a ReadingEdge machine. Instructional Media Services supplies equipment and video programs directly to classroom faculty while serving the larger campus community through teleconference down-links.

Ottenheimer Library subscribes and contributes to the Online Computer Library Center (OCLC) and is a founding member of its regional AMIGOS network. In addition to providing authoritative cataloging data, these services allow UALR faculty and students prompt interlibrary loan access to the millions of items held by other member libraries.
libraries. The library also participates in direct-to-user reciprocal borrowing with the nine other University of Arkansas System libraries.

The library is open 87 hours a week when classes are in session; the schedule expands during final exam week. The building is open to the public and all collections are available for in-house use.

Library hours in the fall and spring semesters are 7:45 a.m. to 10:45 p.m. Monday through Thursday, 7:45 a.m. to 4:45 p.m. Friday and Saturday, and 1:00 p.m. to 9:45 p.m. Sunday. Summer hours are 7:45 a.m. to 9:15 p.m. Monday through Thursday, 7:45 a.m. to 4:45 p.m. Friday, 9:00 a.m. to 12:45 p.m. Saturday, and 1:00 p.m. to 6:45 p.m. Sunday. Hours vary during holiday and semester breaks.

General information is available by calling (501) 569-3123. The telephone number for reference and documents assistance is (501) 569-8806.

**Library Archives and Special Collections**

The Ottenheimer Library’s Archives and Special Collections Department, located on the second floor of the Library, houses materials on Arkansas and the lower Mississippi Valley. The department contains more than 5.5 million items of archival or manuscript material; 16,250 books; 4,500 pamphlets, posters, and similar materials; 25,000 photographs and postcards; a variety of memorabilia; and the library’s non-circulating book collection.

**Speech, Language, and Hearing Clinic**

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

This clinic has the only diagnostic and rehabilitative training program in audiology in Arkansas. Audiological services include testing of hearing and communication skills, monitoring of hearing problems, hearing aid evaluations, hearing aid checks, training in speech reading, and counseling services for hearing-impaired students who may be experiencing difficulty in school because of hearing problems.

Speech and language services include evaluations and therapy in disorders of articulation, language, stuttering and cluttering, voice, and organic disorders such as laryngectomy, aphasia, cerebral palsy, and cleft palate.

Some services are available at a reduced charge to regularly enrolled students. In addition, referrals are encouraged from community speech-and hearing-impaired children and adults.

**Student Activities**

The Office of Campus Life provides advisement to all registered student organizations including those funded by the activity fee. The office coordinates the assignment of student organization office space, and provides student development and leadership enhancement opportunities for UALR students. The office encourages a diversity of activities designed to entertain and educate while providing opportunities for student development through extracurricular experiences.

The Office of Campus Life is responsible for the fair and equitable allocation of the student activity fee, as well as for monitoring the expenditure and usage of the fee. The office develops and maintains the criteria and policies for the student activity fee allocation process.

**Student Conduct**

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

**Student Organizations**

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

**Student Publications**

UALR recognizes two official student publications on campus. The *Forum* is the student newspaper. It is published weekly during the fall and spring semesters and four times during the summer. The *Equinox* is a student literary magazine, published annually.

**Activities**

UALR maintains a varied and extensive series of events throughout the year. There are assemblies, concerts, dramatic presentations, visiting lecturers, special exhibits, and other opportunities for cultural enrichment. Participants and performers include students, faculty, and alumni, as well as local, state, national, and international Specialists.

**University Writing Center**

The University Writing Center offers writing assistance to any student at any level. Word processing is also available. Two “lab” courses to build writing skills are offered through the Center: RHET 1110 and 2100.

Located in Student Union B 116, the University Writing Center is open six days a week. Hours change each semester. For more information, come by or call (501) 569-8343. You may also visit the Center for help with writing at the University Writing Center Online: [http://www.ualr.edu/owl/](http://www.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. See “Parking” on page 22.
The Academic Program

The academic year includes two regular semesters in the fall and spring and a summer semester of three terms. Some courses are also available between semesters during late spring and winter interim.

The unit of credit is the semester hour. This unit is defined as credit earned for the completion of one hour per week in class for one semester. Two hours or more of laboratory work per week for one semester equal one semester hour of credit. UALR offers night and weekend courses, web-based courses, courses on campus and at various off-campus locations. Admission requirements, fees, and academic performance for night and weekend classes are the same as for day classes. Web-based courses are charged a $25 per hour technology fee.

Continuing education courses are offered as a service to specific professional and vocational groups of the community. These are available on both a credit and non-credit basis.

Degree Requirements

Baccalaureate Degree Requirements

To receive a baccalaureate degree, a student must complete the following requirements:

A minimum of 124 hours of which 30 hours must be in residence and 45 must be upper-level (3000 level or above)

These required hours must include:

• A minimum of a 2.0 cumulative grade point on all work attempted at the University.
• A minimum of a 2.0 cumulative grade point on all work attempted in the academic major and a minimum of a 2.0 cumulative grade point on all work attempted in the academic minor.
• A core curriculum which must include a 3 hour course in U. S. history or U. S. government and a 3 hour course in College Algebra, College Math or higher level math course. See “Core Requirements for Bachelor Degrees” on page 27.
• A major and a minor, a combined major-minor, a double major or a major and an associate degree transferred from another institution in a program not offered at UALR.
• Completion of the Rising Junior Exam: between 45 and 59 college-level hours except for those students who qualify for exemptions. See “Rising Junior Exam” on page 26.

• Completion of the appropriate second language requirement for students seeking a B.A., B.S.E., or B.S.W. degree. See “Second Language Requirement” on page 27.

Associate Degree Requirements

Except for certain programs as specified elsewhere in this catalog, all students receiving the associate degree (the AA or AS) must successfully complete at least 62 hours including the following 15 hours of core courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>RHET 1311 Composition I</td>
<td></td>
</tr>
<tr>
<td>RHET 1312 Composition II</td>
<td></td>
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<tr>
<td>SPCH 1300 Speech Communication</td>
<td></td>
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<tr>
<td>HIST 2311 U.S. History to 1877, or HIST 2312 U.S. History since 1877, or POLS 1310 American National Government</td>
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<tr>
<td>MATH 1315 College Mathematics or MATH 1302 College Algebra</td>
<td></td>
</tr>
</tbody>
</table>

Graduation with an associate degree requires a C average (2.00 cumulative grade point average) on all work attempted at the University; completion of at least 20 hours above the freshman level, unless specified otherwise in the program; and completion of the final 15 hours (excluding credit by examination) in residence. Hours earned as credit by examination are counted as hours toward graduation but are not counted as hours in residence. See “” on page 31.

Courses completed for an associate degree at UALR will be counted toward the appropriate requirements for the baccalaureate degree.

Second Associate Degree

An associate degree may be conferred as a second degree when the first degree is either a baccalaureate or another associate degree, subject to these provisions:

1. The second associate degree must be in a different discipline from the first degree.
2. Students must complete at least 15 credit hours in residence (excluding credit by examination) beyond their first degree.
3. Only credit earned at UALR after completing the first degree will normally apply toward the second degree. However, students in their final semester of studies toward the first degree may complete the course load for that semester with courses applicable to the second degree. Students must file a written statement of their intent to seek a second degree with the Office of Records and Registration at the time of registration.
4. A major must be completed. Courses completed within the previous degree that satisfy requirements for the second major may be

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1. Academic majors and colleges may specify additional and/or more restrictive requirements.
accepted as satisfying course requirements, but not as hours toward
the second degree. These hours do not count as part of the 30, except
as specified in Item 3 above.
5. The core curriculum component in the second associate degree is not
required. However, the state requirement for the United States
history or government course does apply if the student has not
successfully completed such a course as part of another degree
program.

Second Baccalaureate Degree
A second baccalaureate degree may be conferred subject to these
provisions:
1. Students must complete at least 30 credit hours in residence
(excluding credit by examination) beyond their first degree.
2. Only credits earned at UALR after completion of the first degree will
normally apply toward the second degree. However, a student in the
final semester of studies toward the first degree may complete the
course load for that semester with courses applicable to the second
degree provided the student files a written statement of intent with
the Office of Records and Registration at the time of registration.
3. A major must be completed. Courses completed within the previous
degree that satisfy requirements for the second major may be
accepted as satisfying course requirements, but not as hours toward
the second degree. These hours do not count as part of the 30, except
as specified in Item 2 above.
4. A minor is not required.
5. If a major taken as a part of another baccalaureate degree, a course in
United States history or government (HIST 2311, HIST 2312, or
POLS 1310) must be completed, See “U.S. Traditions: United States
History or Government Requirement” on page 26.

There is no second language proficiency requirement for students
seeking second baccalaureate degrees.

Regulations
These provisions apply to baccalaureate degrees:
1. Hours earned as credit by examination are counted as hours toward
graduation but are not counted as hours in residence. See “” on
page 31.
2. Two courses, up to eight hours, may count toward both major(s) and
minor(s) requirements.
3. A student in the process of completing more than one major or minor
may have one calendar year following graduation with one major to
complete the additional declared major(s)/minor(s) if:
   - The student has a valid degree plan on file which specifies
     requirements for more than one major or minor
   - The student completes an application for graduation which
     indicates that a total of seven or fewer hours remain to complete
     the additional major(s)/minor(s)
4. A student may elect to graduate under the provisions of the UALR
Undergraduate Catalog in effect during any semester in residence at
UALR before qualifying for a degree. Students who interrupt their
enrollment at UALR for more than five consecutive calendar years
must use the catalog current at the time of readmission or later. A
student transferring to UALR from regionally accredited four-year
institutions, community colleges, or junior colleges with 13 or more
hours of accepted credit may graduate under the provisions of a
UALR Undergraduate Catalog in effect during any semester of the
previous five years in which they were enrolled at the other
institution. Note: At no time may a student follow the provisions of a
UALR Undergraduate Catalog that is more than five years old at the
time of the student’s entry into UALR.
5. A student enrolled at UALR who intends to enroll concurrently or as
a transient student at another accredited institution should obtain
advance approval and then complete a Special Exception Form to
assure that courses taken at other institutions will be applied toward
UALR graduation requirements.

- A senior may participate in commencement exercises prior to the
  completion of all degree requirements if the student has:
  - A cumulative 2.0 grade point on all work attempted at UALR
  - A cumulative 2.0 grade point in the academic major and in the
    academic minor
  - No more than nine hours remaining to complete degree
    requirements

Submitted a graduation application following prescribed procedures.
See “Graduation Procedure” on page 32.

Core Requirements
A student seeking a baccalaureate degree must complete a total of 44
hours in core courses. Listed below are the required categories, the
number of hours required in each category, and the specific courses that
will fulfill that requirement. Students majoring in a program of study
offered through the CyberCollege follow a different core. See “DCISSE
Core Requirements” on page 190.

Transferring Core Courses
As a public, state institution, UALR participates in the State
Minimum Core Curriculum, which allows students to transfer up to 35
hours of general education or core courses among Arkansas institutions.
Students transferring to or from UALR and another publicly supported
Arkansas college or university should check with their advisors to assure
proper transfer of core courses.

Students entering the University with an associate of arts degree
due to a regionally accredited college or university meet UALR’s core
curriculum requirements. Specific majors may have additional
requirements.

U.S. Traditions: United States History or
Government Requirement
Arkansas law requires that all students who receive an associate or
baccalaureate degree successfully complete a course in U.S. history or U.S.
government.

This requirement can be met by HIST 2311 U.S. History to 1877, HIST
2312 U.S. History Since 1877, or POLS 1310 American National
Government. Other United States history or government courses may also
meet this requirement. However, the student should check with an
advisor in the Department of History or the Department of Political
Science before choosing to meet the requirement with any other course.

Rising Junior Exam
The “Rising Junior Exam,” officially called the Arkansas Assessment of
General Education (AAGE), is designed to assess students’ learning in
the general education core. State law requires all baccalaureate students at
publicly funded colleges in Arkansas to take the AAGE when they have
completed between 45 and 59 college-level hours. College-level hours
include all accepted transfer hours but do not include developmental
hours. Students who completed 60 college-level hours before January 1, 1995 are exempt from the AAGE.

Students should take the exam as close to the 59-hour point as
possible, as completion of more of the general education core
requirements will likely result in a higher score. Students who have
reached the 60-hour point must take the exam in order to proceed to their
junior year.

The Office of Testing Services makes every effort to notify
sophomores when they are eligible to take the Rising Junior Exam.
Eligible students who have not been notified should contact Testing
Services. It is the responsibility of each student to make whatever
arrangements are necessary to be present for the exam as scheduled.
Arrangements will be made for students with disabilities who need
special accommodations. Such students should notify the Office of
Testing Services and Student Life Research when they submit their
registration.

For additional details, contact the Office of Testing Services and
Student Life Research, (501) 569-3198.
Core Requirements for Bachelor Degrees

**English/Communications** 
(9 hours)
- RHET 1311 Composition I
- RHET 1312 Composition II
- SPCH 1300 Speech Communication

**Science** 
(8 hours)
- ANTH 1415 Physical Anthropology
- ASTR 1301 Introduction to Astronomy
- and ASTR 1101 Introduction to Astronomy Laboratory
- BIOL 1400 Evolutionary and Environmental Biology
- BIOL 1401 Science of Biology
- CHEM 1409 Chemistry and Society
- ERSC 1302 Physical Geology
- and ERSC 1102 Physical Geology Laboratory
- ERSC 1303 Historical Geology
- and ERSC 1103 Historical Geology Laboratory

**Fine Arts/Humanities** 
(9 hours)
- FNAR 2300 Introduction to Fine Arts I
- FNAR 2301 Introduction to Fine Arts II
- MUHL 2200 Introduction to Music
- ARHA 2200 Introduction to Visual Art
- DRTH 2200 Introduction to Theatre and Dance

**One course (3 hours) from the following:**
- ENGL 2327 World Literature
- ENGL 2338 World Literature Themes
- PHIL 2320 Ethics and Society

**Math** 
(3 hours)
- MATH 1315 College Mathematics
- MATH 1302 College Algebra

**Social Sciences** 
(15 hours)
- HIST 1311 History of Civilization I
- HIST 1312 History of Civilization II

**One course (3 hours) from the following:**
- HIST 2311 U.S. History to 1877
- HIST 2312 U.S. History since 1877
- POLS 1310 American National Government

**Two courses (6 hours) from the following:**
- ANTH 2316 Cultural Anthropology
- GNST 2300 Introduction to Gender Studies
- GEOG 2312 Cultural Geography
- PSYC 2300 Psychology and the Human Experience
- RELS 2305 World Religions
- RTVF 2330 Mass Media and Society
- or JOUR 2330 Mass Media and Society
- SOCI 2300 Introduction to Sociology
- CRJU 2300 Introduction to Criminal Justice
- ECON 2301 Survey of Economics
- POLS 2301 Introduction to Political Science

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1. Students may substitute four (4) hours of the eight (8)-hour science requirement in the core curriculum with technical courses, with certain conditions. The substitution will be two for one; the student must take two (2) hours of a technical course for every one (1) hour of an approved competency course. A technical course is defined as any science course at the 1000-level or above that is not approved as a core course. Each substitute course must have a laboratory component, and all substitute courses must be from the same discipline. A science course is from the disciplines of anthropology, astronomy, biology, chemistry, earth science, or physics. The remaining four (4) hours of the science competency requirement must be met by an approved core course.

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**Second Language Requirement**

**BA Students**

Students seeking a BA degree are required to complete a 2000-level second language course or demonstrate equivalent proficiency as measured by a competency test. Languages which may be used to meet the second language requirement include French, German, Spanish, American Sign Language, and other languages as approved and arranged through the Department of International and Second Language Studies. Students may meet the requirement in one of the following ways:

- Successfully completing a 2000-level second language course at UALR and satisfying all the prerequisites for that course
- Transferring the equivalent courses from another institution of higher education
- Demonstrating equivalent proficiency on a language test.

**BSE Students**

Students seeking a BSE in Early Childhood Education are required to complete 3 hours of a second language and 3 hours of English as a Second Language.

Students seeking a BSE in Middle Childhood Education are required to complete 6 hours of a second language or English as a Second Language in any combination or level. Students may meet the requirement in one of the following ways:

- Successfully completing a second language course at UALR and satisfying all the prerequisites for that course
- Transferring the equivalent courses from another institution of higher education
- Demonstrating equivalent proficiency on a language test.

**BSW Students**

Students seeking a BSW degree are required to complete the elementary I and II levels of a second language sequence of courses (Foreign Language 1311 and 1312 or Interpretation 1320 and 1321) or demonstrate equivalent proficiency as measured by a competency test. Languages which may be used to meet the second language requirement include French, German, Spanish, and American Sign Language. Students may meet the requirement in one of the following ways:

- Successfully completing six hours of an approved sequence of second language courses at UALR
- Transferring the equivalent courses from another institution of higher education to UALR
- Demonstrating equivalent proficiency on a language test.

**Demonstrating Proficiency in a Second Language to Satisfy the Requirements for BA, BSE, and BSW Degrees**

Students who wish to meet second language requirements by demonstrating proficiency should take either the CAPE test or the American Sign Language Proficiency test before enrolling in UALR language courses. These tests are also used to determine placement in the appropriate language courses.

The following students do not need to take the test before enrolling in a language course:
- Students who have already completed UALR second language courses
- Students who have completed university-level courses for transfer credit in French, German, Spanish, or ASL
- Students who have never studied French, German, Spanish, or ASL before and are enrolling in first semester courses in these languages.

Second language course waivers may be granted to students with verified disabilities, after examination by a special committee. Students seeking such a waiver should contact the associate vice chancellor for academic affairs, (501) 569-3204.

**French, German, or Spanish**

Students must take a computerized, multiple-choice test (the F-CAPE, the G-CAPE, or the S-CAPE) coordinated by the Office of Testing Services and Student Life Research.

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2. Courses in signing systems other than ASL such as manually coded English and conversational sign language will normally not apply. Contact the Department of Counseling, Adult and Rehabilitation Education (CARE) for more information.
To demonstrate proficiency in a language other than French, German, or Spanish, students should contact the Department of International and Second Language Studies, Stabler Hall 201, (501) 569-3272.

American Sign Language (ASL)

Students must take a two-part test administered by the Department of Counseling, Adult, and Rehabilitation Education’s (CARE) interpreter education program. The first part of the test is a written multiple choice exam. The second part is an interview with program faculty conducted in American Sign Language. Results of both the written test and interview are shared with the student at the end of the interview. Students should contact the Department of CARE for an appointment.

Developmental Courses

The developmental courses at UALR are MATH 0300 Elementary Algebra, MATH 0301 Intermediate Algebra, RHET 0310 Composition Fundamentals, and READ 0310 College Reading. UALR’s admission policy requires that all developmental courses be completed during a student’s first 42 hours of course work.

Students may not take any developmental course at UALR more than twice. A student is considered to have taken a developmental course if he or she receives a grade of NC or W for the course. Students who have failed to pass a particular developmental course twice should speak to their advisors or the department offering the course to explore other options for covering the material. A student is not considered to have taken a developmental course if he or she has been granted academic clemency since that time.

Developmental Courses and GPA

Grades from developmental courses will not be computed into a student’s official grade point average (GPA). Credit hours earned from developmental courses do not count towards the minimum required for the student’s degree.

Course Eligibility, Requirements, and Developmental Course Options

RHET 1311 Composition I:
- A minimum ACT English score of 19 or a minimum SAT I verbal score of 470 is required for enrollment in RHET 1311 Composition I. RHET 0310 Composition Fundamentals, is offered for students who do not meet the minimum requirement for Composition I.
- Students with an ACT English score of 29 or greater or an SAT II writing score of 630 or greater are automatically exempted from Composition I. They may enroll either in Honors Composition or in Composition II to complete the core curriculum composition requirement.

Honors Composition:
- Students with an ACT English score of 27 or greater or an SAT II writing score of 590 or greater who also have an A or B in high school English are invited to enroll in RHET 1320 Honors Composition.
- Students who feel they qualify for Honors Composition but who do not receive invitations should contact the Department of Rhetoric and Writing at (501) 569-3160. The three-hour Honors Composition course satisfies the core curriculum requirement.

MATH 0301 Intermediate Algebra
- Enhanced mathematics ACT score of 17 or ACT Elementary Algebra subscore of 9.
- Mathematics SAT score of 460.
- Elementary Algebra Score of 109 or greater.
- A score of 73 on the departmental test over MATH 0300 Elementary Algebra.

MATH 1302 College Algebra or MATH 1315 College Mathematics
- Enhanced mathematics ACT score of 19 or ACT Elementary Algebra subscore of 10.
- Mathematics SAT score of 510.

• Meet prerequisites for MATH 0301 and score of 63 on the College Level Mathematics Test.³

MATH 1303 Trigonometry, MATH 1342 Business Calculus or MATH 1311 Applied Calculus I
- Score of 53 on the CLEP over Mathematics 1302 College Algebra.
- Meet prerequisites for Mathematics 1302 and score of 86 on the College Level Mathematics Test.

MATH 1304 Calculus I
- Meet prerequisites for MATH 1302 or MATH 1303 and score of 103 on the College Level Mathematics Test.

MATH 1305 Calculus II
- A grade of 2 or greater on the AP Calculus AB Test.

MATH 1312 Applied Calculus II
- A grade of C or greater in MATH 1311 and a score of 103 on the College Level Mathematics Test.

Placement and credit validation in second languages

• Students who have acquired language skills before enrolling at UALR may request a test to find the level at which to enroll. If the language proficiency test indicates the student should take a developmental course, a placement test must be used instead of ACT or SAT test scores if standardized test scores are not required because the student is a transfer student. The Mathematics Placement Tests may also be used by students if ACT or SAT test scores are more than five years old.

• Students who have taken UALR courses while enrolled simultaneously in high school courses or who have taken Advanced Placement (AP) courses for college credit (and will have submitted AP test scores to UALR for credit by July 15) may enroll as first-time freshman and be eligible to accept or waive participation in ACT 1014.

Act 1014 Graduation Agreement Program (GAP)

ACT 1014 of the 2005 Arkansas Legislature gives first-time entering college freshman (students who have never taken courses at any university before) the option of signing a contract with UALR guaranteeing graduation in 8 semesters of planned, closely supervised study.

Eligible Degree Programs:

Visit http://www.ualr.edu/provost/act1014/ for a list of eligible degree programs. Please note that ACT 1014 is only one of many paths to successful completion of a college degree. Choosing to waive participation in ACT 1014 will not effect your chance for a successful college career.

When choosing to participate in the ACT 1014 guaranteed 8-semester degree completion program, a student accepts responsibility for monitoring his or her progress toward a degree and for making choices, in consultation with an ACT 1014 compliance advisor, that will lead to graduation in 8 semesters.

To be eligible to participate in this program, a student must agree to:

1. Choose an intended degree program (major) from the list of participating programs [embedded link] and be a degree-seeking student who will graduate at UALR. This program is only available for one major plus minor or one major/minor (combination) degree program. Two-year Associate’s degree students and Donaghey Scholar’s students are not eligible;
2. Submit all required admissions credentials (high school transcripts or GED test record; ACT, SAT, Accuplacer and/or Advanced Placement (AP) scores; and immunization record) by July 15;
3. Meet with the intended major (degree program) advisor before August 1;
4. Sign a degree program contract with the intended major advisor during the initial advising session (to be held before August 1);

3. The Mathematics Placement Tests, given by Testing Services, may be used instead of ACT or SAT test scores if standardized test scores are not required because the student is a transfer student. The Mathematics Placement Tests may also be used by students if ACT or SAT test scores are more than five years old.

4. Students who have taken UALR courses while enrolled simultaneously in high school courses or who have taken Advanced Placement (AP) courses for college credit (and will have submitted AP test scores to UALR for credit by July 15) may enroll as first-time freshman and be eligible to accept or waive participation in ACT 1014.
5. Submit ACT, SAT, Accuplacer, and/or Advanced Placement (AP) test scores that place him or her above all developmental (pre-college level) course requirements; and

6. Enroll continuously (cannot skip enrollment in a semester for any reason) at or above full-time student status (12 or more hours as detailed in the degree plan contract each semester).

Failure to meet any of these conditions will require that a student waive participation in the ACT 1014 program. If you know that you will not or cannot fulfill these eligibility requirements, you must waive participation in the ACT 1014 program now, or you will be required to waive participation at the time of your first advisement session. Once your ACT 1014 option is waived, this one-time decision is final.

Please be advised that your continued participation in the ACT 1014 program requires many responsibilities on your part, including your agreement to:

1. Follow exactly the 8-semester degree plan for the intended major and minor degree program as outlined in the degree program contract, including taking the number of hours (full-time or more) specified by the contract;

2. Never change the major, minor, concentrations, or emphasis of your degree program after your ACT 1014 contract is signed;

3. Meet all program requirements semester to semester as detailed in your degree plan and never be placed on academic probation or suspension for any semester of enrollment;

4. Have your class schedule approved by your official ACT 1014 departmental advisor and register for classes each semester during the early registration period;

5. Accept any available course section that can be accommodated in your class schedule, or notify your official ACT 1014 advisor in writing that a contract variation or adjustment will be required before the first day of classes;

6. Enroll continuously (cannot skip enrollment in a semester for any reason) and complete at least 30-36 semester credit hours of approved course work each academic year as outlined in your degree plan contract.

Other events based on your actions that may void the guarantee include the dropping or failure of a course, withdrawal (for any reason) from the university, non-payment of tuition or fees, and disciplinary actions.

Failure to meet any of the above conditions means that a student has voided his or her ACT 1014 program agreement, and will be excluded from further participation in the ACT 1014 degree guarantee. If you know that you will not or cannot fulfill these program responsibilities, you may waive participation in the ACT 1014 program now, or you will be required to void further participation at the time of the first advisement session after a responsibility has been voided. Once your ACT 1014 option is voided, the decision is final.

For more information about ACT 1014, visit:
http://www.uarl.edu/provost/act1014/.

**Academic Policies**

**Academic Adjustment Policy**

In compliance with federal regulations, it is the policy of UALR to respond to student requests for course accommodation, substitution, and other adjustments because of a documented disability on an individual basis and in a manner that does not result in discrimination. Where requests are complex and not easily handled through the regular course substitution procedures, an established committee will review the case and make a determination.

Students who wish to request academic adjustments because of a disability should consult the academic adjustment procedures, which are printed in the UALR Student Handbook, or contact Disability Support Services at (501) 569-3143.

**Clemency**

Any undergraduate student who has previously attended UALR or its predecessor institutions (Little Rock Junior College or Little Rock University) and whose attendance at UALR or any institution of higher education has been interrupted for a period of at least two years may qualify to request academic clemency providing he or she meets all of the criteria specified below. Under this policy a student may apply to have grades and credits earned at UALR previous to the separation removed from his or her grade point average. Approval of a request for clemency requires the signature of the student’s advisor and the provost.

After re-entering UALR following a separation of at least two years from any institution of higher education, a student may request academic clemency at the Office of Records and Registration. The student shall specify the term(s) for which clemency is desired. The request will be forwarded, along with appropriate permanent record information, to the student’s advisor for approval. The advisor shall forward the request to the provost.

Clemency shall cover all credits earned during the term(s) for which clemency is requested. A student who requests and receives academic clemency is ineligible to graduate with honors. The student’s complete record will remain on the transcript with the added notation of academic clemency received.

Any petition for academic clemency must be requested and granted prior to the awarding of a 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 Undergraduate Catalog in effect at the time of re-enrollment.

**Probation and Suspension**

Students will be placed on academic probation at the end of a term if their current term or cumulative grade point average (GPA) drops below a 2.00 GPA. Students on academic probation are limited to a maximum of 13 credit hours each semester. Students will continue on academic probation as long as their current term or cumulative GPA continues to remain below a 2.00 GPA. Students needing fewer than 18 credit hours for graduation may request an exemption for the credit hours restriction to this student’s academic advisor or department chairperson. Denial of this request may be appealed to the dean of the college and the provost. Students will be removed from academic probation when both their current term and cumulative GPAs are 2.00 or above. If after two successive terms of academic probation the student’s current term and cumulative GPAs are below 2.00, the student will be academically suspended for one semester (fall, spring, or entire summer). Suspension occurs after the third successive semester of academic probation.

Students who have finished their academic suspension are required to contact the Office of Records and Registration (ADS 203). These students will be placed on academic probation, limited to 13 credit hours per semester while on probation, and placed in a single semester probation status. This status requires that the student achieve a current term GPA of 2.00 or greater each term until the student’s cumulative GPA is 2.00 or higher. Failure to achieve a term GPA of 2.00 or greater while in a single semester probationary status will result in academic suspension for two full semesters.

Students admitted with academic deficiencies will be limited to a maximum of 13 credit hours each semester. When such a student achieves a current term and cumulative GPA of 2.00 the limitation in hours is removed. If the student fails to obtain the required current term or cumulative GPA then the student is placed on academic probation. Such students will not be subject to academic suspension until the end of the third semester unless they were admitted on a single semester contract basis.

A student suspended from UALR who earns academic credit from another accredited college or university during the period of suspension may receive credit for the course at UALR when readmitted if the course is transferable and the student has a grade of C or greater.

**Attendance**

Each faculty member has the prerogative of setting specific attendance requirements for classes. In some courses, active student participation is an integral part of the course, and the instructor may base a portion of the students’ grades on attendance and participation. In general, students are expected to attend class regularly. Students who miss class are responsible for finding out about the material covered, homework assignments, and any announcements or examinations. Students may be administratively withdrawn from a class by the instructor for excessive absences during the semester.

**Changes in Enrollment**

The academic calendar lists deadlines for dropping or adding a class or section. This schedule is binding for all students. Adding or dropping a course, including withdrawing from one section to another or changing credit status in a course may be accomplished through the computer registration system (BOSS) within the published time limits. Classes may
be dropped in the Office of Records and Registration until the drop deadline see “Academic Calendar” on page ix.

**Course Load and Enrollment Limits**

UALR must define enrollment statuses by mandate of the U.S. Department of Education. These definitions are used to determine eligibility for financial aid and scholarships, and are used consistently throughout the campus.

- A full-time undergraduate student must be enrolled for a minimum of 12 credit hours a semester.
- A three-quarter-time undergraduate student must be enrolled in 9 to 11 hours a semester.
- A half-time undergraduate student must be enrolled in 6, 7, or 8 hours a semester.

Undergraduate summer semester enrollment hours include hours from all summer terms. The full-time, three-quarter, and half-time enrollments are the same as fall or spring semesters. Course load definitions for graduate students are different and can be found in the UALR Graduate Catalog.

A student may not enroll for more than 18 credit hours in a regular semester (Fall, Spring, or Summer) without prior permission of the person who approves his or her degree plan. In the case of undeclared majors, permission must be obtained from the Office of Academic Advising. The 18-hour limit includes all work for academic credit, including residence, correspondence, and extension work.

**Courses Taken by UALR Students at Other Colleges and Universities**

Students may choose to enroll at another regionally accredited academic institution while attending UALR. In order to assure that the credit received elsewhere meets UALR degree program requirements, students must complete the Special Exception Form available in the Office of Records and Registration. Students are strongly urged to complete this form before taking the course.

**Advanced Placement Program**

Advanced Placement (AP) examinations are administered by selected secondary schools. Students who take AP exams should have official score reports sent directly to the UALR Office of Testing Services for evaluation. You may also contact the College Board at (888) 225-5427 to request scores be released to UALR; the school code for UALR is 6368.
<table>
<thead>
<tr>
<th>Course Type</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>UALR Course(s) Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>French Literature</strong></td>
<td>FREN 3332 Introduction to French Literature</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>German Language</strong></td>
<td>GERM 1311 Elementary German I</td>
<td>3</td>
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<td>GERM 1312 Elementary German II</td>
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<td></td>
<td>GERM 2311 Intermediate German I</td>
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<tr>
<td><strong>Latin Literature</strong></td>
<td>CLNG 2301 Intermediate Classical Language I</td>
<td>3</td>
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<td>CLNG 2302 Intermediate Classical Language II</td>
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<td><strong>Latin Vergil</strong></td>
<td>CLNG 1311 Elementary Biblical Hebrew</td>
<td>3</td>
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<tr>
<td></td>
<td>CLNG 1312 Biblical Hebrew Reading</td>
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<tr>
<td><strong>Spanish Language</strong></td>
<td>SPAN 1311 Elementary Spanish I</td>
<td>3</td>
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<td>SPAN 1312 Elementary Spanish II</td>
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<td>SPAN 2311 Intermediate Spanish</td>
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<td>SPAN 3332 Introduction to Spanish Literature</td>
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<td>GEOG 2312 Cultural Geography</td>
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<td><strong>History</strong></td>
<td>HIST 1311 History of Civilization I</td>
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<td>HIST 1312 History of Civilization II</td>
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<tr>
<td><strong>U.S. History</strong></td>
<td>HIST 2311 U.S. History to 1877</td>
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<tr>
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<td>HIST 2312 U.S. History since 1877</td>
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<td><strong>World History</strong></td>
<td>HIST 1311 History of Civilization I</td>
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<td></td>
<td>HIST 1312 History of Civilization II</td>
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<tr>
<td><strong>Mathematics</strong></td>
<td>MATH 1451 Calculus I</td>
<td>3</td>
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<td></td>
<td>MATH 1452 Calculus IId</td>
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<tr>
<td><strong>Calculus AB</strong></td>
<td>Eligible to enroll in MATH 1452 Calculus IId</td>
<td>2</td>
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<tr>
<td><strong>Calculus BC</strong></td>
<td>Eligible to enroll in MATH 1452 Calculus IId</td>
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<td>MATH 1451 Calculus I</td>
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<tr>
<td><strong>Calculus BC “AB Subscore”</strong></td>
<td>Eligible to enroll in MATH 2453 Calculus IIIe</td>
<td>3</td>
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<tr>
<td><strong>Statistics</strong></td>
<td>STAT 2350 Introduction to Statistical Methods</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>Music</strong></td>
<td>MUTH 1310 Music Fundamentals</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>Physics</strong></td>
<td>PHYS 1321 Elementary Physics I</td>
<td>3</td>
<td></td>
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<td>PHYS 1322 Elementary Physics II</td>
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<tr>
<td><strong>Physics B</strong></td>
<td>Eligible to enroll in PHYS 2321 Physics for Scientists and Engineers I</td>
<td>3</td>
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<tr>
<td><strong>Physics C Mechanics</strong></td>
<td>Eligible to enroll in PHYS 2322 Physics for Scientists and Engineers II</td>
<td>3</td>
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<tr>
<td><strong>Physics C Electricity and Magnetism</strong></td>
<td>Eligible to enroll in PHYS 1332 Electricity and Magnetism</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>Political Science</strong></td>
<td>POLS 2301 Introduction to Political Science</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>U.S. Government and Politics</strong></td>
<td>POLS 1310 American National Government</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>Psychology</strong></td>
<td>Eligible to enroll in PSYC 3320 Introduction to Applied Psychology</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>Eligible to enroll in PSYC 2300 Psychology and the Human Experience</td>
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</tbody>
</table>
| **Some AP tests are undergoing revision. All information is subject to change.**

- a. Exempt from ARHA 2310, but student must complete ARHA 2311 and an additional 3 hours in upper-level art history.
- b. Student must complete an additional 3 hours in upper-level art history.
- c. If final grade in MATH 1452 is B or greater, credit will be awarded for MATH 1451.
- d. If final grade in MATH 2453 is B or greater, credit will be awarded for MATH 1452.
- e. If final grade in PSYC 3320 is B or greater, credit will be awarded for PSYC 2300.
Credit by Examination

UALR offers students the opportunity to obtain credit through examination in certain courses. There are currently four sources of examination credit:

- Departmental Examination Program (DEP)
- College Level Examination Program (CLEP)
- Excelsior College Examinations (formerly Regents College and ACT-PEP)
- Advanced Placement Program (AP)

All tests conform to these general regulations:

- Students who successfully test out of a course shall receive credit hours for that course with a credit grade (CR) but no grade points
- The examination shall be administered at least once per semester and in such a manner as to facilitate access by the student.
- Departmental tests and CLEP subject examinations are administered at UALR. Excelsior College Examinations are computer-based tests administered at Prometric Testing Centers. Any prospective, currently enrolled, or continuing student may take these tests.
- Students who take CLEP or Excelsior College Examinations should have official score reports sent directly to the UALR Office of Testing Services for evaluation. Credit obtained through examination is recorded as approved hours on the student’s official, permanent record without grade or grade points after the student has been enrolled at UALR for one semester.
- Additional information may be obtained from Testing Services by calling (501) 569-3198 or at the web site: http://www.ualr.edu/tsdept/.

Dual Credit

Students may count two courses, up to eight hours, toward both major and minor requirements. (Limitations may exist in some programs. Students should check with their advisors.)

Final Examinations

Final examinations must be taken at the time scheduled. Makeup examinations may be given to students who, because of unforeseeable circumstances involving illness, accident, or serious family emergency, were unable to take the regular examination. Such exams will be given only on the approval of the instructor and the department chairperson.

Grades and Grading System

Grades are reported in the permanent student academic record and are posted on students’ permanent transcripts. A permanent record of grades is maintained by the Office of Records and Registration.

<table>
<thead>
<tr>
<th>Permanent letter grades and point values</th>
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<tbody>
<tr>
<td>A</td>
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<td>B</td>
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<td>AU</td>
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<td>MG</td>
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Students may take one course each semester on a CR/NC basis with instructor approval arranged at the time of registration. The selection of courses is limited to electives. Courses in which a department requires CR/NC grading are not included in this limitation.

The designation I, or incomplete, is appropriate where the instructor deems that circumstances beyond the student’s control prevented timely completion of course requirements. The designation normally is given by the instructor only after consultation with the student and after the student has been informed in writing; additionally, a copy of the written notice is filed with the department chairperson regarding work to be completed and the completion date.

The work must be completed and the I converted by the instructor to the appropriate grade within 90 days for undergraduate courses and within one year for graduate courses from the time the I was recorded. Failure to do so will result in the I being administratively changed to an F.

A request to extend the deadline to complete an I must be completed by the instructor and forwarded to the Office of Records and Registration prior to the 90-day expiration date. The request must include a specific date by which all course work will be completed.

Grade Changes

All grade changes must be approved by the department chairperson under whose jurisdiction the course was taught. Forms for securing that approval are available in the departmental offices. Grades cannot be changed after a student graduates from UALR.

A final course grade may not be changed on the basis of a second final examination or additional course work undertaken or completed after a student’s final course grade has been reported by the instructor to the Office of Records and Registration.

Students at UALR have the right to appeal any grade that they feel was unsatisfactory. The formal process by which a student can appeal a decision on a final grade is described in detail in the “Grade Appeals” section of the UALR Student Handbook, which is available in the Office of Educational and Student Services.

Graduation Procedure

Students must apply no later than the end of the sixth week of the fall or spring terms to be considered for graduation for that term. To be considered for summer graduation, students must apply by the end of the second week of Summer II (see “Academic Calendar” on page ix for exact dates). Application submission by the deadline will normally assure a graduation confirmation decision at the end of the designated semester. Applications received after the deadline may not be processed prior to the conferral date. If the student does not meet the official expected term graduation date, he or she must reaply.

To be included in the Fall or Spring Commencement Program, all fall or spring applicants must submit their application online by the date published in the UALR Registration Guide and Class Schedule for the semester. The application for graduation is completed by going to the secure portion of BOSS. Go to http://boss.ualr.edu/ and log in. Once you log in select “Student Services and Financial Aid” and select “Student Request Menu” to complete the online application. Program printing deadlines will not be extended. At the time of graduation, the Office of Records and Registration will not be able to make exceptions for students submitting applications after the deadline. Please refer to the UALR Registration Guide and Class Schedule for more information.

Students will normally receive their diplomas within six weeks of the fall or spring conferral dates assuming the deadline is met. Summer graduates must submit their applications by the end of the second week of Summer 2 to ensure a September diploma delivery.

Undergraduate students are not charged a graduation fee.

Graduation Term

In order to be awarded a degree in the term of graduation, a student must complete all requirements and obligations no later than the date grades are due as listed in the “Academic Calendar” section of this catalog. This includes but is not limited to grades of I, MG, and IP. Students failing to meet this deadline must reapply for graduation and will be awarded their UALR degree the following term, provided all requirements have been met.

Honors

Chancellor’s and Dean’s List

Names of students whose academic performances have been superior are recorded on the Chancellor’s and the Dean’s Lists. This recognition is also noted on the student’s grade report and on official transcripts. This status will be granted at the end of each semester in which the following qualifications have been met:

- At least nine hours for credit with a grade of A, B, C, or CR
- At least a 3.9 grade point average for the semester
- No D, F, I, or NC grades on the semester grade report
Dean’s List:
- At least nine hours for credit with a grade of A, B, C, or CR
- At least a 3.5 grade point average for the semester
- No D, F, I, or NC grades on the semester grade report

Departmental Honors

Several departments at UALR offer honors programs to exceptional students. Admission to an honors program is generally tied to the student’s grade point average and year standing and may require nomination by a faculty member. Such programs are distinct from graduation with honors; in addition to meeting and maintaining a certain grade point average, qualifying students take a special curriculum in the major. Requirements may include advanced study, seminars, or a research project and presentation. Departmental honors are posted on the student’s academic transcript at graduation. Contact individual departments for more information.

Graduation Honors

Graduation honors are calculated on all academic work including all UALR credit courses, all repeated courses and all work completed at all other institutions, whether accepted as transfer credit at UALR or not.

The bachelor’s degree with honors will be conferred upon candidates who graduate and earn a minimum cumulative grade point on all courses taken (both transfer courses and credit courses at UALR) as follows:
- Summa cum laude: minimum grade point average of 3.90
- Magna cum laude: minimum grade point average of 3.70
- Cum laude: minimum grade point average of 3.50

A minimum of 30 hours in residence at UALR is required to qualify for a degree with honors. A student qualifies for honors based on the grade point average on all hours, including repeated courses at UALR and including transfer hours whether or not accepted for credit.

All academic work, including transfer courses and repeated courses, is included in the final calculation for honors. Some courses from institutions outside of the U.S. are calculated in the admissions process on a pass/not pass basis. In order for a student to be considered for honors, all credentials from institutions outside of the U.S. must be evaluated to determine an A, B, or C equivalency.

The associate degree with honors will be conferred upon candidates who at graduation have earned a minimum cumulative grade point on all college work (both transfer and residence credit) of 3.70. The recipient must have met all requirements for graduation with an associate degree and must not have completed more than 83 credit hours.

A UALR student can be awarded graduation honors only once. Students who graduate from another college or university and pursue a second undergraduate degree at UALR are not eligible for honors.

University and departmental honors (but not awards) may be posted on the academic transcript.

Honors Organizations

The national honor society of Phi Kappa Phi recognizes and encourages superior scholarship in all academic disciplines. Members are elected each year from among the upper 10 percent of the senior class and the upper 5 percent of the junior class. Provision is also made for the election of outstanding graduate students and distinguished faculty. The UALR chapter of Phi Kappa Phi was established in 1972.

There are also subject-oriented honors organizations at UALR, contact individual departments to inquire about honors organizations.

Military Service Credit

UALR will accept up to 16 hours of lower-level elective credit (including physical education) for courses found in the latest edition of “A Guide to the Evaluation of Educational Experiences in the Armed Services.” The credit will be unclassified.

UALR also accepts a minimum of 12 hours of regular or residential credits received through the United States Armed Forces Institute (USAFI). Acceptance of such courses for credit toward a major or minor is determined by the academic department most directly affected.

Veterans of military service and persons with law enforcement service can receive up to four hours of credit for physical education at the rate of one hour of credit for each six full months of active duty. Veterans should present a copy of their DD 214 Form immediately on enrolling to receive such credit.

Name Changes

U.S. citizens

In order to comply with a number of government agency reporting requirements, the University must record each student’s name as it appears on his/her social security card. Students who need to change their names on UALR records must complete a name change form (available at the Office of Records and Registration) and present a social security card and picture identification when submitting the form. After the change is implemented, the name on the UALR transcript, diploma, and other documents will read as printed on the social security card. If the social security card is incorrect, students must change their records with the Social Security Administration Office first. No changes will be made to the UALR record until a new Social Security Card is issued and presented to the Office of Records and Registration.

International students

International students who need to change their names on UALR records should consult with the Director of Records and Registration, who will specify appropriate documentation.

Repeated Courses

If an undergraduate student repeats a course for credit, only the last grade will be computed into the cumulative grade point average. (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 first obtain the approval of the chairperson of the department offering the course to be assured it is an identical course.

All grades for repeated courses are included in calculations for graduation honors. Once a degree has been awarded, repeated courses will not be accepted.

Student Classifications

Level

- Freshman: a student who has satisfactorily completed fewer than 30 credit hours.
- Sophomore: a student who has satisfactorily completed at least 30 credit hours and fewer than 60 credit hours.
- Junior: a student who has satisfactorily completed at least 60 credit hours and fewer than 90 credit hours.
- Senior: a student who has satisfactorily completed at least 90 credit hours.

Status

- Regular: a student who is admitted as a degree candidate.
- Transient: a student who is admitted for one semester or summer and who is in good standing at his or her primary institution.
- Postbaccalaureate: a student who has already earned a baccalaureate degree and is enrolled in undergraduate work for credit.

Student Email

Student email accounts are created within 24 hours of class registration and are an official means of communication between the University and the student. Important University-related information will be sent to individual email accounts. Students are responsible for regularly reading email messages. Types of communication include but are not limited to: financial aid information, inclement weather closings, e-bills and payment deadlines, registration information, and library notices. The UALR email system can be accessed at http://mail.uarl.edu/.

Transcripts

Transcripts are issued only at the request of the student and must include the student’s signature. Transcript requests should be made at least three working days prior to the desired date of issue. A $5 fee per transcript must be received before a transcript will be issued. No transcript or other evidence of attendance is issued to or for a student who owes money to UALR.

Transcripts that have been presented for admission or evaluation of credit become a part of the student’s permanent record and are not reissued. Transcripts from other institutions, if needed, must be sent to UALR directly from the original issuing institution.
Information
Academic Advising

Academic advising at UALR is based upon a review of a student’s entire record for purposes of placement in required course work that leads to the completion of the student’s desired major.

Advising is mandatory for all students each semester and must be done well in advance of published registration dates. Provisional and temporary students are not eligible for academic advisement until all required admission credentials are submitted and evaluated by the Office of Records and Registration. After this evaluation has occurred, academic advising will be required each semester.

Undeclared majors will be advised by advisors in University College’s Office of Academic Advising until they are accepted into the college of their major. Each college has established entrance requirements for majors.

Auditing a Course

A student who may enroll in a course but not participate in the formal assignments of the class nor receive a grade or credit. Enrollment is entered on the student’s permanent record. Criteria to receive the audit grade may be set forth by the instructor of the course. Auditing is subject to the professor’s approval and the payment of the applicable fees. Auditors may not change their registration to credit after the deadline listed in the academic calendar, which is normally the end of the registration period.

Continuing Education Unit

For certain non-credit educational activities, UALR awards the Continuing Education Unit (CEU). One CEU is awarded for every 10 contact hours of instruction. A CEU is not applicable toward a degree nor can it be converted to regular academic credit.

Cooperative Education

UALR Cooperative Education integrates a student’s academic study with work experience. The work experience lasts 16 weeks during the fall and spring semesters and 10 weeks during the summer semester. The student is involved in a supervised, paid, and credit-bearing internship related to his/her area of study. For more information, call the Office of Cooperative Education at (501) 569-3584.

Declaring a Major

When students reach a minimum number of hours or complete certain course requirements as specified by particular colleges within UALR, they are ready to declare a major and exit University College.

Students must request admission into the degree-granting college of their choice by completing an Academic Major Declaration Form online. Upon acceptance, the student’s records are sent to the major department where all future advisement will take place. If students are denied admission to their major, they will continue to be advised by the Office of Academic Advising until requirements are met.

Students with double majors must complete two requests to change major and/or minor online. The request will be sent to the student’s major area, and the major department will decide whether the student has met all the requirements necessary to declare a major. Students with double majors do not need to complete a minor. See “Baccalaureate Degree Requirements” on page 25.

Students transferring from one UALR degree-granting college to another (change of major) complete the request to change major and/or minor online. The request to change major and/or minor is completed by going to the secure portion of BOSS. Go to http://boss.ualr.edu/ and log in. Once you log in select “Student Services and Financial Aid” and select “Student Request Menu” to complete the online application.

See also “Second Baccalaureate Degree” on page 26.

Degree Plan

Colleges and schools ask their majors to complete a degree plan, a form detailing the program of studies a student should pursue to complete graduation requirements. The plan lists hours completed, course substitutions, waivers allowed, courses still needed, and other requirements for the degree. When declaring a major, students should consult the appropriate department chairperson about degree requirements. A degree plan should be filed with that department as soon as possible or, in any event, after the student has completed 60 credit hours.

Students should confer with the appropriate chairperson regarding any major or minor requirements. Students enrolled in associate degree programs should file a degree plan after completing approximately 30 hours.

Directory Information and Student Records

Student educational records maintained by UALR fall into two general categories: directory information and student records. Directory information is defined as:

- Student’s name
- Address
- Telephone number
- Date and place of birth
- Major field of study
- Classification by year
- Number of hours in which enrolled and number of completed
- Parents’ and spouses’ names and addresses
- Marital status
- Participation in officially recognized activities and sports
- Weight and height of members of athletic teams
- Dates of attendance including matriculation and withdrawal dates
- Degrees, scholarships, honors, and awards received, including type and date granted
- Most recent previous educational agency or institution attended
- Photograph

Directory information is public information and is open to the public. However, a currently enrolled student may request that directory information be withheld by completing an appropriate request form in the Office of Records and Registration. This request will remain in effect until revoked by the student in writing. This request denies access of a student’s directory information to anyone other than a government agency or lending agency.

Student records include course grades and all other formal evaluations of the student’s work. These records are confidential and available only to the individual student. As the custodian of educational records, UALR assumes the trust and obligation to insure that full protection will be given to these records.

UALR policies and procedures are in full compliance with regulations implementing the Family Educational Rights and Privacy Act of 1974 (FERPA). Copies of this act and its implementing regulations are on file in the Office of Campus Life and the Office of Records and Registration and are on reserve in the Ottenheimer Library. Policies and procedures regarding student records are published in the UALR Student Handbook.

Independent Research and Study

Most departments offer advanced students the opportunity for independent study or research. Each department sets the qualifications and methods for its independent study courses. Those courses are normally available to advanced majors at varying levels of credit. The student and the instructor agree on the nature and requirements of the project at the time of registration. A student cannot receive credit for more than six credit hours of independent study except by permission of the person who approves the degree plan.

Occupational Programs Credit

UALR will accept up to 16 hours of lower-level undesignated elective credit for occupational programs from accredited institutions. Students to whom this might apply should have their transcripts evaluated by the Office of Records and Registration. An evaluation will not be made until after the student is enrolled.
University College seeks to provide a positive learning experience to entering students that will enhance their ability to complete an associate or baccalaureate degree.

To support the mission of UALR, University College has established the following goals:
1. To provide a first academic home for all entering and transfer students.
2. To provide ample opportunity for students to adjust to college life and enhance their personal development.
3. To provide educational opportunities that will enrich the intellectual lives of students, promote career development, and clarify possible major options.
4. To offer a consolidated support program to assist in student retention.
5. To provide an opportunity for all entering students to complete general education requirements.
6. To provide an opportunity to meet the specialized admission requirements of specific associate or baccalaureate degree programs.

University College also offers a variety of services including developmental academic advising (pre and post-admission), career development, educational assessment (placement), personal and social counseling, developmental courses (by referral), and the advisement for the associate of arts in general studies degree. The first year experience and leadership training courses are offered through University College.

**Academic Advising**

Thea Zidonowitz Hoeft, director.

The primary function of this service is to provide academic advising for new and continuing students who have not declared a major or been admitted to another college. A complete review of the student’s academic record is provided each term; required test scores and course placement, transfer work, and the core curriculum requirements are all considered.

During individual and/or group sessions, consultation is focused on students’ academic goals and academic progress. Students are offered academic information, referral, and guidance based on University policies, state laws, major program requirements, and individual career aspirations.

E-mail advising is available for continuing students who are eligible. Students should check the departmental web site listed at the end of this section for eligibility requirements.

The office maintains all University College undergraduate student advisement records and forwards these documents to the appropriate UALR college or academic department when the student is officially accepted into a major. The degree plan for the associate of arts in general studies is developed and maintained in this office for students who are seeking this degree.

Additional information is available by calling the department at (501) 569-3386, or online at the UALR Academic Advising web site: [http://www.ualr.edu/aaddept/](http://www.ualr.edu/aaddept/).

**Cooperative Education**

Jesse Mason, director.

Cooperative Education is a structured educational strategy integrating classroom studies with learning through productive work experiences in a field related to a student’s academic and career goals. It provides progressive experiences in integrating theory and practice. Co-op is a partnership among students, faculty, and employers, with specific responsibilities for each party.

UALR recognizes that a cooperative education assignment is an integral part of a student’s educational experience. The cooperative education plan is designed for students who want to broaden their education and for employers who wish to have a continuous flow of qualified talent. Students entering their junior year may choose from a variety of time frames for scheduling work and class attendance. Choices include alternating (full time) and parallel (part time) and are available during the spring, summer, and fall semesters.

The University is committed to cooperative education as a means of strengthening the educational program, keeping curriculum current, identifying new program areas, and increasing community support.

The Office of Cooperative Education can be reached by telephone at (501) 569-3584. Its web site can be viewed at [http://www.ualr.edu/coopedu](http://www.ualr.edu/coopedu).

**Counseling and Career Planning**

Mike W. Ingfield, director.

This service component of University College provides counseling in the areas of personal and social development, career development, and stress management. The placement element helps students find part-time employment while attending UALR and locate appropriate graduate school admission or employment upon graduation. Workshops, seminars, and special programs are offered to help students make progress toward their goals of personal development, education, and career. The staff is available to meet with clients for individual and group counseling. Various media, such as computer-assisted career planning programs, videotapes, cassette tapes, and printed material, are also available for
student use. These resources cover topics in several areas of personal development. The internet program, Discover for Adult Learners, is designed to assist individuals in career development. Videotapes and workshops can be used to develop job search skills such as resume writing, interviewing, and networking.

Employment listings, online credentials service, and on-campus interviews are some of the functions of the placement component. In the area of personal development, programs include stress management strategies, assertiveness training, personal and social counseling, and self-esteem development.

The office can be reached by calling (501) 569-3185 or online at http://www.uarl.educcps_dept/.

Testing Services and Student Life Research

Diane Jarrett, director.

The primary function of this service is to provide the structure through which the assessment needs of students as individuals and as members of University-defined groups can be met. A secondary function is to provide comprehensive studies of the characteristics of the University College students.

Supervision is given to a wide variety of institutional testing programs, national programs for graduate and professional school admission, and programs of certification boards and licensing agencies.

The office provides comprehensive information about the University credit by examination program. Additionally, students may be referred for special testing by counselors.

Bulletins of information, including test descriptions, registration procedures, and costs, are available for these examinations: ACT Program, Arkansas Assessment of General Education Program, College Level Examination Program, Collegiate Assessment of Academic Proficiency, Departmental Examination Program, Graduate Management Admission Test, Graduate Record Examinations, Law School Admission Test, Miller Analogies Test, Praxis Examinations, Pre-Professional Skills Test, Executor College Examinations, and UALR Placement Examinations.

Additional information may be obtained from Testing Services by calling (501) 569-3198 or at the web site: http://www.uarl.edu/testing/.

Courses in Personal Awareness (PEAW)

PEAW 1190 Career Planning and Life Options

A systematic approach to developing decision-making skills and an orientation to the world of work. The focal point of the course is the student and his or her goals. Emphasis is on clarifying and formulating realistic career goals and an appropriate career plan and strategy to achieve these goals. Credit/no credit. One credit hour.

PEAW 1300 The First Year Experience

Helps students reach their educational objectives. Interactive instructional methods promote the development of critical thinking skills and positive educational values. Students 1) complete a personal assessment to enhance their understanding of communication and learning styles, lifestyle risks, and loci of control; 2) learn to identify and use appropriate resources both on campus and within the community; 3) acquire skills needed to promote study, personal wellness, goal setting and achievement; 4) develop strategies to manage money, time, and stress wisely; and 5) participate in a service learning experience outside the classroom in a setting designed to foster community service. Final course grades are A, B, C, and NC. Three credit hours.

PEAW 1310 Library Research and Resources

Basic techniques for using the library effectively. Use of information resources, including on-line catalog, computerized databases, bibliographies, and indexes. Attention to students' individual subject needs. Three credit hours.

PEAW 1124, 2124, 3124, 4124 Practicum: Leadership Training

Designed to recognize and enhance the development of student leaders through an orientation to campus and community resources and through participation in service projects and social activities. Enrollment is restricted to students participating in official university leadership groups. Final course grades are A, B, C, and NC. One credit hour.
The University provides opportunities for interdisciplinary study, combining aspects of several academic disciplines that may be affiliated with more than one department or college. These include baccalaureate and associate degrees, minors, and individual courses.

**Interdisciplinary Degree Programs**
For more information about the programs below, students should consult the listings appearing under the appropriate department or college in this catalog.

**College of Arts, Humanities, and Social Sciences**
- International Studies Program .................. 53

**College of Business**
- International Business Program .................. 109

**Department of International and Second Language Studies**
- Department of Music .............................. 73
- Major in German Studies ........................... 69

**Department of Philosophy and Liberal Studies**
- Courses in Liberal Studies (LIST) ................. 84

**Department of Rhetoric and Writing/Journalism Program**
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**Journalism Program/Department of Marketing and Advertising**
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**Department of International and Second Language Studies**

**Prelaw Studies**
*Charles Chastain, advisor.*

Students interested in pursuing a legal career through law school after completion of the bachelor's degree should get the most from their undergraduate education. Law school admission committees are usually impressed by applicants who can convincingly demonstrate that they have challenged their thinking and reasoning skills in a variety of courses. Law schools prefer students who can think, read, and write well, and who have some understanding of what shapes human experience.

Unlike the premedical curriculum, which contains some specific, mandatory courses, there is no recommended set of prelaw courses. Law schools prefer that you reserve your legal study for law school and fill your undergraduate curriculum with broad, diverse, and challenging courses. Courses that introduce you to broad legal principles may present you with enough information to decide whether or not you want to continue with a legal education, but they are rarely taught with the depth and rigor as actual law school courses. UALR also offers a legal studies minor for a general understanding of law and legal institutions, but it is not a required minor for law school admission. See “Legal Studies” on page 54, or contact the coordinator, Neil Snortland, in the political science department at (501) 569-3331.
The prelaw advisor may be able to direct you to courses that will better prepare you for law school. However, the prelaw advisor will be more helpful during the law school application process. The prelaw advisor will have the latest information on the Law School Admission Test (LSAT), the Law School Data Assembly Service (LSDAS), and the requirements of many law schools, including the UALR School of Law.

For more information, contact the prelaw advisor in the criminal justice department at (501) 569-3195.

Pre-professional Studies in the College of Science and Mathematics

The College of Science and Mathematics offers students preprofessional curricula for professional areas requiring a background in science or technology as well as in liberal arts. The associate dean and the college’s Premedical Advisory Committee advise students preparing to enter such programs. Advisement in the other preprofessional areas is available through the associate dean’s office in Engineering Technology and Applied Sciences (ETAS) 125.

Advisement is offered in the following areas:

- Dentistry
- Medicine and related disciplines
- Nursing
- Pharmacy
- Veterinary medicine

Individual Interdisciplinary Courses (IDST)

The content of each of these courses changes with each offering. Interested students should consult the list of current course offerings for the title, description, and teachers of each course. More information can be obtained from one of the instructors listed.

In general, interdisciplinary courses address a theme or a problem from the viewpoints of several academic disciplines or a subject that does not fall within one of those disciplines. These courses are often supervised by more than one teacher. Courses include:

- IDST 1100, 1200, 1300
- IDST 2100, 2200, 2300
- IDST 3100, 3200, 3300
- IDST 4100, 4200, 4300

Each interdisciplinary studies course carries a number and title indicating that course’s level, credit hours, and subject, such as IDST 3312 The Humanities and Technology. All such courses apply as credit hours toward the total needed for graduation and as elective hours. Their applicability toward a major or minor is determined by the department, college, or school of the student’s major or minor field.

Donaghey Scholars Program

C. Earl Ramsey, director.

The Donaghey Scholars Program is UALR’s University-wide honors program. Its interdisciplinary curriculum promotes critical thinking and active learning. Scholars classes demand wide reading and extensive writing and lead to vigorous discussions and frequent independent study.

The Donaghey Scholars admissions process uses academic records, test scores, written essays, recommendations, and personal interviews to determine whether the student would benefit from admission to the program. Since space in the program is limited to a total of 80 students, admission is highly competitive. Each year’s class is composed of incoming college freshmen, students transferring from other colleges, and UALR students who have been referred to the program by faculty members. Both traditional and nontraditional students are in the Scholars Program.

Students who are admitted to the program are granted a scholarship equal to the full in-state tuition, a stipend (currently $1800, $3050, or $4300 per semester), and a generous subsidy applied toward study abroad. Scholars who perform satisfactorily are assured of up to eight semesters of support.

Scholars are small, making it possible for faculty to get to know students and their interests. Informal advising is frequent. Formal advising in the Scholars Program is handled by the director for all scholars who have not declared a major. Because the Scholars Program has requirements spread over four years, the director remains informed of the scholar’s progress in meeting these requirements, even when formal advising has been transferred to the department of the scholar’s major area of study.

The Scholars Program has a specially designed interdisciplinary curriculum, which replaces the University’s core curriculum requirements.

Students admitted to the Donaghey Scholars Program who meet all of the requirements of the Program, as well as all of the requirements in their major and minor fields, graduate as Donaghey Scholars.

Scholars Program Requirements

### Scholars Core Courses:

- **SCHL 1101, 1102 Scholars Colloquium I and II**
- **SCHL 1300, 1301 Rhetoric and Communication I and II**
- **SCHL 1320, 1321 Science and Society I and II**
- **SCHL 2310, 2311 Individual and Society I and II**
- **SCHL 3310, 3311 Individual and the Creative Arts I and II**
- **SCHL 2300, 2301, 3300 History of Ideas I, II, and III**

### Other Requirements:

- One seminar outside the student’s primary field
- Fulfillment of the University’s core curriculum mathematics requirement
- US History or American National Government
- A lab science course
- Successful completion of an oral proficiency examination in a second language
- Study abroad in an approved program
- Final project
- A course in the history of civilization, though not required, is strongly recommended

Courses in Scholars Program (SCHL)

### SCHL 1101, 1102 Scholars Colloquium I and II

Prerequisite: admission to the Scholars Program or consent of the program director. Weekly discussions with faculty and community representatives and a time for advising, testing, and other organizational aspects of the program. One credit hour each semester.

### SCHL 1300, 1301 Rhetoric and Communication I and II

Prerequisite: admission to the Scholars Program or consent of the program director. Logic combined with oral and written communication; critical examination of ideas and facts in a rhetorical context; and effective communication. Three credit hours each semester.

### SCHL 1320, 1321 Science and Society I and II

Prerequisite: admission to the Scholars Program or consent of the program director. Science as a mode of thought and a method of inquiry; impact of scientific thought and scientific technological discoveries on humanity. Three credit hours each semester.

### SCHL 2300, 2301, 3300 History of Ideas I, II, and III

Prerequisite: admission to the Scholars Program or consent of the program director. This course examines three recurring themes: humanity’s conceptions of and perceived relationships to the divine; humanity’s conceptions of reality in general and perceived methods of knowing this reality; and humanity’s conceptions of the roles people do and should play as individuals and as members of the social order. These themes are studied in both Western and non-Western cultures, using the methods of history, philosophy, and the study of literature. This is a three-semester course; all three semesters must be taken. The normal sequence is II, III, I. Three credit hours each semester.

### SCHL 2310, 2311 Individual and Society I and II

Prerequisite: admission to the Scholars Program or consent of the program director. Individual and group relationships, combining views from political science, anthropology, psychology, literature, and history. Three credit hours each semester.
**SCHL 3310, 3311 Individual and the Creative Arts I and II**
Prerequisite: admission to the Scholars Program or consent of the program director. An examination of the role of artistic endeavors in enriching human life, including material from art, architecture, music, dance, literature, and theatre. Students must attend and discuss concerts, plays, exhibits, and related events. Three credit hours each semester.

**SCHL 3150, 3250, 3350 Scholars Seminar**
Prerequisite: admission to the Scholars Program or consent of the program director. Special courses on topics that vary from semester to semester. Scholars seminars will explore issues in depth from an interdisciplinary perspective. These seminars involve active modes of learning (such as reports, projects, or fieldwork); enrollment is normally limited to 15. Non-scholars students are admitted when space is available. One, two, or three credit hours.

**SCHL 4399 Independent Study**
Prerequisite: admission to the Scholars Program or consent of the program director. This course is designed for students engaged in research leading to the Scholars final project. Topic and thesis committee must be approved by the Scholars Policy Council. Three credit hours.
EXTENDED PROGRAMS

ED 100, 569-3003, 569-8560(fax)

Mark E. Workman, Dean of Extended Programs
Sonja Sanderson, Director

http://ocp.uarl.edu

Through the Office of Extended Programs, UALR offers many options to students who find it difficult to attend class at the main campus. Extended Programs provides credit courses at off-campus locations and via distance learning. A complete degree program, the Associate of Arts in General Studies, is available at UALR Benton.

An Associate of Arts degree received from any publicly supported Arkansas college or university fulfills UALR’s core curriculum; although, specific majors may have additional requirements.

Students should consult the UALR Registration Guide and Class Schedule at http://boss.uarl.edu/ where Extended Programs courses appear under standard departmental listings and separately if searched by choosing the course attribute. For more information about the programs listed below, students can contact the person or office associated with the following program descriptions.

Off-Campus Courses

Many UALR courses are offered via off-campus locations throughout the greater Little Rock area. These courses are especially popular because of the convenient site locations and schedules. Two of the common site locations are henderson Middle School in West Little Rock and the UALR Benton Facilities. Extended Programs may be contacted by telephone at (501) 569-3003 or by visiting the web site at http://ocp.uarl.edu/.

Associate of Arts in General Studies – UALR Benton

Kim Jackson, Assistant Director

UALR offers an Associate of Arts in General Studies degree through UALR Benton. Students completing the degree will be able to advance to a four-year baccalaureate degree program at UALR or other universities. Students can earn the degree by attending a combination of day and evening courses.

The program in Benton, Arkansas is administered by Extended Programs and taught by UALR faculty. Students enrolled for classes at UALR Benton have full student privileges at UALR’s main campus.

For more information, contact UALR – Benton at (501) 860-6003, or visit: http://benton.uarl.edu/

Courses Sponsored by Businesses

UALR occasionally offers credit courses at various business locations when sufficient enrollment can be guaranteed. These courses are made available to all interested students on a space-available basis. Business owners and affiliates are invited to contact Extended Programs, (501) 569-3003, to explore sponsorship opportunities.

Professional Development

UALR offers credit-free professional development classes, workshops, and seminars through Extended Programs. Classes are held at various locations throughout the greater Little Rock area. Professional development classes are offered for credit, non-credit, or continuing education units depending on the subject area. For more information, contact Extended Programs at (501) 569-3003.

Distance Learning

Extended Programs provides a broad array of courses delivered through interactive video, television, and the internet for individuals whose time commitments or location make on-campus attendance at UALR difficult. UALR coordinates more distance learning opportunities for students than any other Arkansas institution. Internet offerings include a variety of courses, certificates programs and degree programs.

Telecourses

Telecourse credit offerings at UALR are nationally produced programs in a variety of disciplines. Some of the telecourse offerings also meet UALR core curriculum requirements.

Telecourses are broadcast on public television or through the University Channel. Students are responsible for viewing the lessons as they are broadcast. If a lesson is missed, video tapes of the programs are available for checkout through the Office of Extended Programs. Television courses meet a limited number of times with an instructor on campus to turn in assignments, obtain course materials, review for tests, and take exams. Class size is limited.

Public television broadcasts are available to most areas of the state, but the University Channel broadcasts are only available to Comcast Cable customers in the Little Rock area. For students without public broadcast reception or Comcast Cable, VHS recordings of the programs can be rented for only $50.00 per semester.

Telecourses are available to any student admitted to UALR, and registration is handled via BOSS. Current telecourse offerings appear in the UALR class schedule under departmental listings and separately if searched using the “Broadcast Television” attribute. Tuition charges are identical to those for traditional courses. There is no distinction made on student transcripts between telecourses and traditional courses.
Due to licensing agreements and air-time availability, course offerings vary. For more information consult the UALR Registration Guide and Class Schedule at http://boss.ualr.edu/, call (501) 569-3003, or visit http://ocp.ualr.edu/telecourses.

Courses Offered as Telecourses

ANTH 2316 Cultural Anthropology
ANTH 3313 Archaeology
ANTH 3333 Women in a Changing Society
GNST 3333 Women in a Changing Society
GNST 3346 Sociology of the Family
GEOG 2310 World Regions
HIST 2311 U.S. History to 1877
HIST 2312 U.S. History since 1877
JOUR 2350 Techniques of Writing for the Mass Media
MUHL 2200 Introduction to Music
POLS 1310 American National Government
PSYC 2300 Psychology and the Human Experience
PSYC 3360 Abnormal Psychology
RTVF 2330 Mass Media and Society
RHET 1311 Composition I
RHET 1312 Composition II
RHET 3316 Writing for the Workplace
SOCI 2300 Introduction to Sociology
SOCI 3333 Women in a Changing Society
SOCI 3346 Sociology of the Family

Internet or Web-Based Courses

Web-based courses utilize the internet for course delivery. Web-based courses are typically delivered through online virtual classroom systems that use a variety of online tools such as email, electronic discussion groups, streaming video, and live audio conferencing.

Students in web-based courses must have access to a computer with a current web browser and internet access. Please note that some web-based course instructors may require on-campus exams or proctored testing at remote sites.

Web-based courses are available to all students admitted to UALR. Current offerings appear in the UALR class schedule under standard departmental listings and separately if searched by the “On-Line Course” attribute. There is no distinction made on student transcripts between web-based courses and traditional courses.

Course offerings vary. As web-based courses are in high-demand, more opportunities are introduced each semester. For more information, contact Extended Programs at (501) 569-3003 or visit http://ocp.ualr.edu/online.html on the web.

Online Minors

Some departments offer their major and minor concentrations completely online. Due to the variety of minor concentrations from which students may choose to build their Bachelor of Arts in Liberal Arts degree and the availability of eligible online course offerings, the online version of the degree is outlined below. Please visit http://ocp.ualr.edu for a current listing of all programs offered entirely online.

Bachelor of Arts in Liberal Arts Online

Dana Steele, program advisor

The UALR Bachelor of Arts in Liberal Arts can be completed online through extended programs, with online course work available from both UALR and other UA system institutions. Sixty (60) credit hours are required, in addition to the UALR core curriculum. The major must include study in three subject areas or concentrations, 18 hours in each area, plus LIST 3310 Reasoning Across the Disciplines and LIST 4310 Liberal Arts Colloquium. Two of the three concentrations must be within the college of Arts, Humanities, and Social Sciences. Please see the concentration areas below that are available online. Students may take a portion of their lower-level work at other regionally accredited colleges and universities and some upper-level credits may also transfer. Please contact the program advisor for additional details.

Students entering the University with an Associate of Arts degree from a publicly supported Arkansas college or university meet UALR’s core curriculum requirements. Specific majors may have additional requirements.

Courses are taught by UALR faculty. Students enrolled in the Bachelor of Arts in Liberal Arts online have regular student privileges at UALR’s main campus and are subject to regular academic policies.

For more information, contact the online program advisor at (501) 569-3411 or (800) 340-6509 (toll-free), or access information at http://www.ualr.edu/bala/.

Minors and Concentrations for the Bachelor of Arts in Liberal Arts Available Online

Some UALR academic departments offer their minors entirely by distance learning. These minors can be completed entirely through use of the internet. Any of these minors may be chosen as a concentration area for the Bachelor of Arts in Liberal Arts Degree.

Criminal Justice

The minor in Criminal Justice is designed for students pursuing careers in law enforcement, corrections, and juvenile and adult courses. This minor requires completion of 18 hours, which must include CRJU 2300 Introduction to Criminal Justice. To fulfill these requirements, Extended Programs offers the following Criminal Justice courses online:

CRJU 2300 Introduction to Criminal Justice
CRJU 3301 Criminal Evidence
CRJU 3303 Survey of Corrections
CRJU 3305 Seminar in Criminal Justice
CRJU 3306 Police Administration and Management
CRJU 3309 Cybercrime
CRJU 3310 Race/Ethnicity and Criminal Justice
CRJU 3312 Victimology
CRJU 3313 Crime and Science: An Introduction to Forensic Science
CRJU 3396 Psychology and the Criminal Process
CRJU 4300 Crime and Behavior
CRJU 4301 Judicial System and Process
CRJU 4303 Readings in Criminal Justice
CRJU 4304 Research Methods
CRJU 4307 Drug Abuse

General Psychology

This minor helps students understand themselves and others by studying factors influencing human behavior. It also introduces students to the essentials of the scientific method as applied to behavioral research. The General Psychology minor requires completion of 18 hours, which must include PSYC 2300 Introduction to Psychology, as well as 15 hours of upper-level courses. Off-campus programs offers the following online courses to fulfill these requirements:

PSYC 2300 Psychology and the Human Experience
PSYC 3330 Health Psychology
PSYC 3356 Developmental Psychology
PSYC 3360 Abnormal Psychology
PSYC 3375 Psychology of Consumer Behavior
PSYC 3380 Cognitive Psychology
PSYC 4320 Physiological Psychology

History

This minor emphasizes and seeks to enhance students' skills in analyzing and integrating factual details, developing and organizing ideas supported by fact, critical thinking, and clear writing. The History minor requires 18 hours, including HIST 2311, 2312, and 12 hours of upper-level history courses.

HIST 2311 U.S. History to 1877
HIST 2312 U.S. History since 1877
HIST 3331 Modern Germany since 1806
HIST 3342 History of Modern China
HIST 3352 American Revolution, 1762-1787
HIST 4302 Magic, Science, and the Occult from Antiquity to Newton
HIST 4315 Religious History of the United States
HIST 4355 History of Arkansas
HIST 4390 Special Topics in History
Legal Studies

A minor in Legal Studies is designed to help students understand and use written and spoken language, to foster a critical understanding of the human institutions and values with which the law deals, and to stimulate creative thinking. Eighteen (18) credit hours are required, with no more than nine (9) hours from each discipline, in order to complete this minor. To satisfy these requirements, the following courses are offered online through Extended programs:

CRJU 3312 Victimology
CRJU 3396 Psychology and the Criminal Process
CRJU 4301 Judicial System and Process
PHIL 1330 Introduction to Critical Thinking
POLS 1310 American National Government
POLS 4350 Constitutional Law: Governmental Powers
POLS 4351 Constitutional Law: Civil Liberties
RHET 3315 Persuasive Writing
RHET 3316 Writing for the Workplace
RHET 3317 Introduction to Nonfiction Writing

Management

The Management minor is designed to develop students’ problem-solving and decision-making techniques in business environments. Emphasis is placed on the development of behavioral competencies and on human resource management issues in the workplace. Electives provide an opportunity to develop additional management skills. Eighteen (18) credit hours are required, including MGMT 3300 and MGMT 3320. A grade of C or greater in all UALR or transfer courses is required in order to fulfill a course requirement in the management minor block of courses.

MGMT 3300 Organizational Behavior and Management
MGMT 3320 Human Resources Management
ACCT 2310 Principles of Accounting I
MGMT 3305 Management Information Systems
MGMT 3340 Applied Organizational Behavior
MGMT 3362 Small Business Management
MGMT 4360 Compensation Management
MGMT 4377 International Business Management
MGMT 4385 Special Topics in Management
MGMT 4391 Employment Law

Political Science

The Political Science minor is designed for students interested in understanding government and political affairs at the international, national, state, and local level. This minor requires completion of 18 hours, which must include POLS 1310 American National Government, POLS 2301 Introduction to Political Science, and at least 9 hours of Extended Programs. Off-campus programs offer the following online course to fulfill these requirements:

POL 1310 American National Government
POL 2301 Introduction to Political Science
POL 3301 Seminar in Political Science
POL 3320 The American Presidency
POL 4330 US-Panamanian Relations: Decisions and Documents
POL 4340 International Relations

POLS 4345 The Clinton Presidency
POLS 4350 Constitutional Law: Governmental Powers
POLS 4351 Constitutional Law: Civil Liberties

Professional and Technical Writing

A minor in Professional and Technical Writing is designed to teach students to read critically, write clearly, speak persuasively, and list carefully - all skills that will assist them in finding and keeping professional positions in a highly competitive job market. A minor in Professional and Technical Writing requires 18 hours beyond the core curriculum requirements. Courses can be selected from the following:

RHET 3315 Persuasive Writing
RHET 3301 Editing for Usage, Style, and Clarity
RHET 3316 Writing for the Workplace
RHET 3317 Introduction to Nonfiction Writing
RHET 3326 Technical Writing
RHET 4306 Writing for Business and Government
RHET 4317 Advanced Nonfiction Writing
RHET 4347 Topics in Nonfiction Writing
RHET 4371 Writing on the Web
RHET 4375 Grant Writing

Sociology

The minor in Sociology is designed to teach students to analyze and understand basic socio-cultural processes, statuses, and roles. To complete this minor, 18 credit hours are required, which must include SOCI 2300 Introduction to Sociology or SOCI 3383 Classical Sociological Theory or SOCI 3384 Contemporary Sociological Theory. The online courses offered by Extended Programs to satisfy these requirements are:

SOCI 2300 Introduction to Sociology
SOCI 3330 Racial and Minority Groups
SOCI 3383 Classical Sociological Theory
SOCI 3392 Environmental Sociology
SOCI 4353 The Sociology of Developing Nations
SOCI 4395 Senior Seminar (variable topics – course is repeatable for up to 6 hours of credit)
ANTH 3312 North American Indians

Speech Communication

This minor is designed to aid students in developing a knowledge, appreciation, and skills that contribute to the full understanding and practice of effective interpersonal and organizational communication. This minor in speech communication requires 18 hours beyond SPCH 1300, including SPCH 2310, 3320 and 12 upper-level hours in speech communication. Extended Programs offers the following online courses to fulfill these requirements:

SPCH 2310 Human Communication Concepts
SPCH 3300 Interpersonal Communication
SPCH 3316 Interviewing
SPCH 3320 Advanced Public Speaking
SPCH 3323 Conflict Management
SPCH 3350 Nonverbal Communication
SPCH 4311 Organizational Communication
SPCH 4323 Family Communication
Students interested in teaching in secondary education in Arkansas must be licensed by the state in a particular subject area. UALR programs in secondary teacher education are designed to prepare students for licensure. Candidates for licensure must pass examinations mandated by the state, be U.S. citizens, and pass a criminal background check and a tuberculosis skin test.

Secondary Teacher Licensure Areas

- Art Education
- English & Language Arts Education
- Foreign Language Education (French, German, or Spanish)
- Vocal Music Education
- Social Studies Education (History or Political Science)
- Physical Education, Wellness, Leisure
- Mathematics Education
- Life Science / Earth Science Education
- Physical Science / Earth Science Education

All secondary education programs have several components: university core requirements, an 18-hour Secondary Education Minor, and a major in a content area (such as Art, English, Math, or Biology, etc.). Some programs also require additional courses, blocks of courses, or other special minors related to the licensure area. Programs in which a Bachelor of Arts degree is awarded include a second language proficiency requirement. See “Second Language Requirement” on page 27.

All students must have a minimum of 124 hours (including 45 hours of upper-level courses) to graduate. Because these requirements often overlap and are complicated in other ways, early and careful planning is necessary to complete the programs in four years. Students are encouraged to contact a faculty advisor in their area of interest as early as possible after acceptance to UALR.

The components of the secondary education programs are described below. Course descriptions, numbers, and titles are found in the catalog sections for the departments offering the courses.

University Core Requirements

A student seeking a baccalaureate degree must complete a total of 44 hours in core courses. Options within the core may be restricted by the content majors, associated blocks of courses, or special minors in some licensure areas. A student should consult the requirements of his or her licensure area before selecting core courses.

Retention

Once admitted, students are required to maintain a 2.65 grade point average, with at least a C in all professional courses (this includes all courses associated with the licensure/degree plan). In addition, students' professional behaviors, content knowledge, and classroom performance will be evaluated throughout the program.

Successful completion of the licensure program is not based solely on the number of course credits, but requires demonstration of specified professional knowledge, skills, and behaviors.

Once the student has begun the program, periodic evaluations will assess progress. Failure to progress satisfactorily might result in a student being removed from the program. While a student may require additional time to meet some performance expectations, the faculty may limit that time and reserves the right to drop a student from the licensure program should appropriate progress not be demonstrated.
Minor in Secondary Education

Praxis Exams:
- Praxis I: Reading, Writing, and Mathematics
- Praxis II: Principles of Learning and Teaching 7-12
- Praxis II: All Content exams (listed on the following pages for each licensure area)

The Secondary Education Minor is required in all programs and should not be confused with other blocks of courses or special minors required in some licensure areas.

Block I: Career Awareness Semester
Admission Requirements: 2.65 GPA; Completion of 60 hours; Completion of the following core courses with a grade of C or above:
- MATH 1302 OR 1315,
- RHET 1311 AND 1312,
- SPCH 1300
Block I Course Requirements: (3 hours)
- SCED 3210 Instructional Skills and Assessment
- SCED 3110 Instructional Skills Practicum

Block II: Mastery of Principles of Learning and Teaching
Admission Requirements: 2.65 GPA; a grade of C or above in all Block I courses; Passing scores on the Praxis I Exam:
- Reading 172
- Writing 174
- Mathematics 172
Block II Course Requirements: (6 hours)
- SCED 4321 Teaching Diverse Adolescents
- SCED 4122 Adolescent Diversity Practicum
- SCED 4123 Adolescents with Special Needs
- SCED 4124 Classroom Management

Block III: Student Teaching
Admission Requirements: 2.65 GPA; a grade of C or greater in all Block II classes.
Block III Course Requirements: (9 hours)
- TCED 4600 Student Teaching
- SCED 4330 Reflective Teaching

Content Components
See “Content Components.”

Core Requirements for Bachelor Degrees with Secondary Teacher Licensure

English/Communications (9 hours)
- RHET 1311 Composition I
- RHET 1312 Composition II
- SPCH 1300 Speech Communication

Social Sciences (15 hours)
- HIST 1311 History of Civilization I
- HIST 1312 History of Civilization II
One course (3 hours) from the following:
- HIST 2311 U.S. History to 1877
- HIST 2312 U.S. History since 1877
- POLS 1310 American National Government

Two courses (6 hours) from the following:
- ANTH 2316 Cultural Anthropology
- GNST 2300 Introduction to Gender Studies
- GEOG 2312 Cultural Geography
- PSYC 2300 Psychology and the Human Experience
- RELS 2305 World Religions
- RTVF 2330 Mass Media and Society
- or JOUR 2330 Mass Media and Society
- SOCI 2300 Introduction to Sociology
- CRJU 2300 Introduction to Criminal Justice
- ECON 2301 Survey of Economics
- POLS 2301 Introduction to Political Science

Math (3 hours)
- MATH 1315 College Mathematics
- MATH 1302 College Algebra

Science (8 hours)
- ANTH 1415 Physical Anthropology
- ASTR 1301 Introduction to Astronomy
- and ASTR 1101 Introduction to Astronomy Laboratory
- BIOL 1400 Evolutionary and Environmental Biology
- BIOL 1401 Science of Biology
- CHEM 1409 Chemistry and Society
- ERSC 1302 Physical Geology
- and ERSC 1102 Physical Geology Laboratory
- ERSC 1303 Historical Geology
- and ERSC 1103 Historical Geology Laboratory

Fine Arts/Humanities (9 hours)
One course (3 hours) from the following:
- ENGL 2337 World Literature
- ENGL 2338 World Literature Themes
- PHIL 2320 Ethics and Society
One of the following sequences (6 hours):
- FNAR 2300 Introduction to Fine Arts I
- and FNAR 2301 Introduction to Fine Arts II
- or MUHL 2200 Introduction to Music
- and ARHA 2200 Introduction to Visual Art
- and DRTH 2200 Introduction to Theatre and Dance

1. Students in the Social Studies licensure area should consult the requirements of that area prior to enrolling in one of these courses.
2. Students in the Mathematics, Life/Earth Science, or Physical/Earth Science licensure areas should consult the requirements of those areas prior to enrolling in one of these courses.
Praxis Series Tests
Students in all programs must pass several standardized exams mandated by the State of Arkansas, The Praxis Series: Professional Assessments for Beginning Teachers, developed by Educational Testing Services, Inc. Successful completion of the Praxis I is required for admission to Block II of the Secondary Education Minor.

In order to complete the Secondary Education Minor, students must also pass the Praxis II pedagogy exam (Principles of Learning and Teaching) and all required Praxis II content exams within their licensure area. The content exams, listed on the following pages, are those required by the State of Arkansas at the time of publication of this catalog but are subject to change. Students who do not pass the exams are ineligible to graduate under a secondary education program degree plan with a minor in secondary education and are ineligible for teaching licensure. In such cases, students may qualify to graduate under another degree plan, although additional course work may be required.

Students should consult an advisor in their licensure content area before registering to take exams.

Students must submit completed “Praxis II” scores to the College of Education.

Content Components
All programs require the completion of a major in the chosen field and in some cases require additional courses, blocks of courses, or other special minors. When the hours accumulated within a content area, taken together with university core hours, second language hours, and the 18 hours in the Secondary Education minor do not total 124 (of which at least 45 are upper-level), students must take additional general electives.

Licensure Area: Art

Praxis II Licensure Exams:

- ARST 3310 Basic Drawing
- ARST 3310 2-D Design
- ARST 2310 Figure Drawing
- ARST 2315 3-D Design
- ARST 2318 Designing with New Technologies

Foundations (15 hours)

- ARST 1310 Basic Drawing
- ARST 1315 2-D Design
- ARST 2310 Figure Drawing
- ARST 2315 3-D Design
- ARST 2318 Designing with New Technologies

Studio (27 Hours)

- ARST 3310 Advanced Drawing I
- ARST 3320 Painting I
- ARST 3330 Printmaking I
- ARST 3340 Graphic Design I OR
- ARST 3380 Illustration

ARST 3350 Ceramics I
ARST 3360 Sculpture I
ARST 3370 Photography I
ARST 3312 Crafts I
3 hours of ARST electives

Art History (12 Hours)

- ARHA 2310 Survey of the History of Art I
- ARHA 2311 Survey of the History of Art II
- Two additional ARHA courses, excluding 2200, 4302 and 4303

Art Education (10 hours)

- ARED 3316 Teaching Art in the Secondary School
- ARED 3345 Public School Art
- ARED 4325 Foundations in Art Education
- ARED 4194 Independent Study (Student teaching)

Students in the bachelor of arts in art/secondary education program who want to enroll in a master of arts in art or master of fine arts program after graduation need to take additional studio and art history course work at the undergraduate level.

Licensure Area: English Language Arts

Praxis II Licensure Exams:

- ENGL 3330 Approaches to Literature
- ENGL 3331 Major British Writers I
- ENGL 3332 Major British Writers II
- ENGL 3311 History of the English Language
- ENGL 3312 Grammatical Analysis of the English Language
- ENGL 3360 Selected Topics (when taught as Studies in World Literature)
- ENGL 4199 Career Perspectives
- ENGL 4202 Teaching Literature in the Secondary Schools

Additional ENGL Requirements (12 hours total) to include:

- American Literature (3 hours)
  - ENGL 3321 American Literature I
  - ENGL 3322 American Literature II
  - ENGL 3323 American Literature III

- African-American Literature (3 hours)
  - ENGL 3326 African-American Literature I
  - ENGL 3327 African-American Literature II

- Additional Competencies (8 hours)
  - RHET 4202 Teaching Writing in the Secondary Schools
  - RHET 3317 Introduction to Nonfiction Writing

Adolescent Literature

- One of the following:
  - RHET 1312 (when the topic is Writing about Children and Their Literature)
  - RHET 4347 (when the topic is Writing for Children and Families)
  - SCED 4316 Adolescent Literature

- Upper level ENGL Electives (6 hours)
Licensure Area: Vocal Music

Praxis II Licensure Exams:
- Music: Content Knowledge
- Music: Concepts and Processes
- Music: Analysis

Students must major in music with an emphasis in applied music and meet with the Music Department Chair each semester for advising.

Music Major (59 hours)
- MUTH 2381 Music Theory I
- MUTH 2391 Music Theory II
- MUTH 3381 Music Theory III
- MUTH 2291 Aural Skills I
- MUTH 2292 Aural Skills II
- MUTH 3231 Form and Analysis
- Music Ensemble (4 hours)
- Applied Study (4 hours)
- Upper-level Applied Study (4 hours)
- MUTH electives (3 hours)
- MUHL 3322 Survey of Western Art Music
- MUHL 3381 American Music

Music Education Emphasis (14 hours)
- MUAP 3224 Conducting I
- MUAP 3325 Conducting II
- MUED 3314 Vocal Pedagogy
- MUED 3315 Teaching Choral Music in the Secondary Schools
- MUED 3322 Music in the Elementary Grades

Students in the secondary education track are strongly encouraged to take either MUTH 4310 Arranging or MUTH 4320 Composition I as the theory elective.

Licensure Area: Foreign Language

Praxis II Licensure Exams:
- Foreign Language Pedagogy in French, German, or Spanish

Students must major in Spanish, French, or German Studies, and it is recommended that the student also minor in a field taught in secondary schools. English, social studies, and the arts are common combinations with foreign languages. An official ACTFL-certified Oral Proficiency Interview is required for all students seeking Teacher Licensure in French, German, or Spanish. Certification at the Advanced-low oral proficiency level is encouraged. See “Department of International & Second Language Studies” on page 68 for details pertaining to each of the majors in foreign languages.

Second Language Education Block (12 hours)
- LANG 4322 Methods of Teaching Second Languages
- LANG 4323 Second Language Acquisition
- LANG 4324 Teaching People of Other Cultures
- LANG 4325 Second Language Assessment

Licensure Area: Social Studies - History

Praxis II Licensure Exams:
- Social Studies - Content Knowledge and Analytical Essays

History Major (30 hours)
- HIST 2311 U.S. History to 1877
- HIST 2312 U.S. History since 1877
- HIST 4355 History of Arkansas
- HIST 4397 Teaching Applications
- 3 hours U.S. History electives
- 6 hours non-U.S. History electives (European ancient, Latin American, or Asian)
- 3 hours Senior capstone seminar (taken after 90 total hours)
- 6 hours upper level history electives

Social Studies Minor (21-30 hours):
- If the following courses are not taken for the core, they must be taken as part of the social studies minor:

ECON 2301 Survey of Economics
- POLS 1310 American National Government
- POLS 2301 Introduction to Political Science
- 6 hours of behavioral sciences from:
  - ANTH 2316 Cultural Anthropology
  - PSYC 2300 Psychology and the Human Experience
  - SOCI 2300 Introduction to Sociology
- 6 hours of geography, the following are recommended:
  - GEOG 2310 World Regions
  - GEOG 2312 Cultural Geography

1. This minor is only available to Secondary Education majors in History or Political Science.
Licencse Area: Social Studies - Political Science

Praxis II Licensure Exams:

**Social Studies - Content Knowledge and Analytical Essays**

**Political Science Major (30 hours)**

- POLS 1310 American National Government
- POLS 2301 Introduction to Political Science
- POLS 3350 Arkansas Government and Politics
- 9 upper-level POLS hours.

At least three hours of POLS courses from each of the following subfields:

- **American Political Institutions and Processes**
  - POLS 3300 American Political Parties
  - POLS 3305 Elections and Public Opinion
  - POLS 3310 Policy Process
  - POLS 3320 The American Presidency
  - POLS 3325 Legislative Process and Behavior
  - POLS 4310 Seminar in American National Government
  - POLS 4320 American Foreign Policy
  - POLS 4301 Judicial System and Process

- **Normative Political Theory**
  - POLS 3390 American Political Thought
  - POLS 4380 Classical Political Theory
  - POLS 4390 Modern Political Theory

**Constitutional Law**

- POLS 4350 Constitutional Law: Governmental Powers
- POLS 4351 Constitutional Law: Civil Liberties

**International Relations/Comparative Politics**

- POLS 3360 Comparative Government: Western
- POLS 3370 Comparative Government: Developing Areas
- POLS 4340 International Relations

**Social Studies Minor**

- ECON 2301 Survey of Economics
- SOCI 2300 Introduction to Sociology
- GEOG 2310 World Regions
- GEOG 2312 Cultural Geography
- HIST 4355 Arkansas History
- HIST 2311 U.S. History to 1877 or 2312 U.S. History from 1877 (must be a course that is not taken as part of the University Core)
- POLS 4397 Social Studies Teaching Applications

If the following courses are not taken as part of the University Core, they must be taken as part of the Social Studies Minor:

- ANTH 2316 Cultural Anthropology
- PSYC 2300 Psychology and the Human Experience

1. This minor is only available to Secondary Education majors in History or Political Science.

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Licencse Area: Physical Education, Wellness, and Leisure Science

Praxis II Licensure Exams:

- **Health and Physical Education: Content Knowledge**
- **Physical Education: Movement Forms - Analysis Design**

Students must major in Health Sciences, completing the following curriculum:

**Professional Area Requirements (8 Hours)**

- CPSC 1370 Computer Literacy (or Demonstrated Proficiency)
- BIOL 1413 Human Anatomy & Physiology
- One-hour course in Leisure Science

**Required Courses (54 Hours)**

- HSCI 1370 Personal Health
- HSCI 2302 Exercise, Wellness & Lifestyle
- HSCI 2372 Care and Prevention of Injuries
- HSCI 2401 Nutrition
- HSCI 3210 Individual Sports
- HSCI 3220 Team Sports
- HSCI 3310 Coaching Theory/Methodology
- HSCI 3320 History/Principles of Health and Physical Education
- HSCI 3302 Exercise Physiology
- HSCI 3372 Advanced First Aid or 4372 Instructor Training
- HSCI 3402 Kinesiology
- HSCI 4330 Physical Activity/Sport and Health Management
- HSCI 4340 Adaptive Physical Education
- HSCI 4350 Teaching Health and Physical Education
- HSCI 3377 Drug Education
- HSCI 4376 Mental Health Education
- HSCI 4374 Family Life and Sex Education

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Licencse Area: Mathematics

Praxis II Licensure Exams:

- **Mathematics: Content Knowledge; Proofs, Models, and Problems, Part 1; and Pedagogy**

Students must earn either a bachelor of science or a bachelor of arts in mathematics. See “Department of Mathematics & Statistics” on page 177 for details about the BA and BS in Mathematics degrees. Contact an advisor in the Department of Mathematics and Statistics for details about specific course requirements.
Licensure Area: Physical/Earth Science

Praxis II Licensure Exams:
Earth Science: Content Knowledge
Physical Science: Content Knowledge
Physical Science: Pedagogy
Chemistry: Content Knowledge
or Physics: Content Knowledge

Students must major in Chemistry, Geology, or Physics

Chemistry Major (Bachelor or Arts)
CHEM 1402/1403 General Chemistry I and II
CHEM 2310/2311 Analytical Chemistry I and II
CHEM 3350/3351 General Organic Chem I and II
CHEM 3150/3151 General Organic Chem Lab I and II
CHEM 3340 Inorganic Chemistry
CHEM 3572 Life Sciences Physical Chemistry
CHEM 4190 Seminar
ERSC 1302/1102 Physical Geology or 1303/1103 Historical Geology
ERSC 2310 Mineralogy
ERSC 2320 Geologic Methods
ERSC 3311 Igneous and Metamorphic Petrology or 3330 Structural Geology
ERSC 4323 Geology of Arkansas
IGSC 4401 Integrated Science Methods
PHYS 1321, 1322 Elementary Physics I and II
PHYS 1121, 1122 Elementary Physics Lab I and II
MATH 1302 College Algebra
MATH 1303 Trigonometry

Geology Major (Bachelor of Science)
ERSC 1302/1102 Physical Geology lecture/lab
ERSC 1303/1103 Historical Geology lecture/lab
ERSC 2310 Mineralogy
ERSC 2320 Geologic Methods
ERSC 3311 Igneous & Metamorphic Petrology
ERSC 3330 Structural Geology
ERSC 3350 Sedimentology
ERSC 3360 Paleobiology
ERSC 4190 Senior Seminar
ERSC 4626 Field Geology
CHEM 1402/1403 General Chemistry I and II
PHYS 1321/1121 Elementary Physics I/lab
PHYS 1322/1122 Elementary Physics II/lab
IGSC 4401 Integrated Science Methods
MATH 1304 Calculus I or 1311 Applied Calculus I
6 hours from any combination MATH/CPSC/STAT

Physics Major (Bachelor of Arts)
ASTR 1301/1101 Intro to Astronomy/Lab
ASTR 2301/2101 Scientific Computing/Image Processing
PHYS 2321/2121 Physics for Scientists and Engineers/ Lab¹
PHYS 2322/2122 Physics for Scientists and Engineers/ Lab²
PHYS 3323/3123 Physics for Scientists and Engineers/ Lab
PHYS 3350 Electronics
PHYS 3315 Teaching Physics in the Secondary Schools
PHYS 4111 Advanced Lab
PHYS 4190 Seminar
ERSC 1302/1102 Physical Geology³
ERSC 1303/1103 Historical Geology³
ERSC 2310 Mineralogy OR 2320 Geologic Methods
ERSC 3311 Igneous and Metamorphic Petrology, 3330 Structural Geology, 3350 Sedimentology, 3360 Paleobiology, or 3372 Surficial Hydrology
ERSC 4480 or 4481 Earth Systems I and II
IGSC 4401 Integrated Science & Methods
CHEM 1402 General Chemistry I
CHEM 1403 General Chemistry II
CHEM 2310 Analytic Chemistry I
CHEM 2311 Analytic Chemistry II
CHEM 3350/3150 General Organic I/Lab or 3351/3151 General Organic II/Lab
MATH 1304 Calculus I³
MATH 1305 Calculus II
MATH 2306 Calculus III

1. May substitute with Physics 1321/1121 with departmental chair approval
2. May substitute with Physics 1322/1122 with departmental chair approval
3. Satisfies part of University core requirement
**Licensure Area: Life/Earth Science**

**Praxis II Licensure Exams:**
- Biology: Content Knowledge
- Biology: Pedagogy
- Earth Science: Content Knowledge

Students may major in either Biology or Geology.

**Biology Major (Bachelor of Science)**
- BIOL 1400 Evolutionary and Environmental Biology or 1401 Science of Biology
- BIOL 2401 Microbiology
- BIOL 2402 Botany
- BIOL 2403 Zoology
- BIOL 3100 Genetics Laboratory
- BIOL 3300 Genetics
- BIOL 3103 Principles of Ecology Lab
- BIOL 3303 Principles of Ecology
- BIOL 4190 Biology Seminar
- BIOL Electives - 12 hours to include at least one course in organismal and cellular biology

Must include 8 hours of freshman chemistry and four hours of organic chemistry (take sequence one or two).

**SCED 3110 Instructional Skills and Assessment Practicum**
Prerequisite: acceptance into the secondary education minor. Corequisite: SCED 3210. This field placement requires three hours a week of observation and teaching activities in a local public school where students will apply basic instructional skills and assessments to teaching lessons within their content area. One credit hour.

**SCED 3210 Instructional Skills and Assessment**
Corequisite: SCED 3110. The basic instructional skills include how to utilize different approaches to teaching content and the assessment of learning for secondary students. Students develop pedagogical techniques, activities, and assessments that encourage and promote learning. Students test lesson plans, instructional skills, and selected teaching strategies in classes in area secondary schools. Two credit hours.

**SCED 4122 Classroom Management**
Prerequisites: admission to Block 2 of the secondary education major and concurrent registration in all Block 2 courses. Students will learn communications, organization, and human relation skills needed for creating a fair and productive classroom. One credit hour.

**SCED 4123 Adolescents with Special Needs**
Prerequisite: admission to Block 2 of the secondary education major and concurrent registration in all Block 2 courses. Students learn strategies for modifying instruction for students with special needs and legal requirements for meeting the needs of special students. One credit hour.

**SCED 4124 Adolescent Diversity Practicum**
Prerequisite: admission to Block 2 of the secondary education major and concurrent registration in all Block 2 courses. This field placement requires three hours a week of observation and teaching activities in a local public school. One credit hour.

**SCED 4150 Practicum in Teaching Reading in Content Areas**
Corequisites: admission to teacher education program, SCED 4250. Provides a supervised field base for putting theory into practice. Students will develop and apply the teaching skills and strategies addressed in the course corequisite. A minimum of 30 clock hours in secondary classrooms is required, during which the unit plan developed in the corequisite course will be implemented. Dual-listed in the UALR Graduate Catalog as SCED 5150. One credit hour.

**SCED 4250 Teaching Reading in the Content Areas**
Prerequisite: admission to teacher education program. Designed for secondary content teachers to enable them to appraise, diagnose, and remedy reading problems that impede instruction. Dual-listed in the UALR Graduate Catalog as SCED 5250. Two credit hours.

**Sequence One**
- CHEM 1400 Fundamental Chemistry I
- CHEM 1401 Fundamental Chemistry II
- CHEM 2450 Organic Chemistry - Short Course

**Sequence Two**
- CHEM 1402 General Chemistry I
- CHEM 1403 General Chemistry II
- CHEM 3350/3350 General Organic Chemistry I

**Geology Major (Bachelor of Science)**
- ERSC 1302/1102 Physical Geology lecture/lab
- ERSC 1303/1103 Historical Geology lecture/lab
- ERSC 2310 Mineralogy
- ERSC 2320 Geologic Methods
- ERSC 3311 Igneous & Metamorphic Petrology
- ERSC 3330 Structural Geology
- ERSC 3350 Sedimentology
- ERSC 3360 Paleobiology
- ERSC 4190 Senior Seminar
- ERSC 4626 Field Geology
- BIOL 1400 Evolutionary and Environmental Biology or 1401 Science of Biology
- 4-6 hours of BIOL courses at or above the 2000-level
- ERSC 3360 Paleobiology (may be counted as upper-level Biology hours)
- CHEM 1402, 1403 General Chemistry I and II
- MATH 1304 Calculus I OR 1311 Applied Calculus I
- 6 hours from any combination of MATH, CPSC, or STAT courses
- IGSC 4401 Integrated Science Methods

**SCED 4305 Middle School Methods**
Includes an exploration of the literature related to characteristics of the urban middle school child, contrasting patterns of programs for early adolescence, and techniques for effective teaching in the urban middle school. The importance of student and teacher characteristics and program organization and goals is assessed as they relate to quality education for 10- to 14-year-old children. Dual-listed in the UALR Graduate Catalog as SCED 5305. Three credit hours.

**SCED 4321 Teaching Diverse Adolescents**
Prerequisites: admission to Block 2 of the secondary education minor and concurrent registration in all Block 2 courses; ANTH 2316, PSYC 2300 or the equivalent. Students use concepts of adolescent development and cultural diversity to develop curriculum, design lessons, and select teaching materials and techniques to meet the needs of students at different developmental stages and of different cultures. Three credit hours.

**SCED 4330 Reflective Teaching and Professionalization**
Prerequisites: Blocks 1 and 2 of the secondary education minor. Corequisite: TCED 4600. Students are expected to develop their capacity to be professional, reflective practitioners as they deal directly or indirectly with teaching, management, or communications encountered during student teaching. Three credit hours.

**SCED 4361 Teaching Adolescent Literature**
A study of adolescent development in literacy and literary skills. A survey and examination of multiculturally balanced selection of works of literature for adolescents and will learn to integrate reading and writing skills with adolescent literature. Dual-listed in the UALR Graduate Catalog as SCED 5361. Three credit hours.

**SCED 4375 Introduction to Secondary Education**
Prerequisites: EDFN 2300, 3320. Corequisites: SCED 4150, 4250. An introduction to the secondary school teacher’s roles as planner, instructor, and evaluator and to the multicultural environment of secondary schools. Students test classroom teaching, management, and evaluation strategies in area secondary schools. Three credit hours.

**SCED 4379 Pre- and Early Adolescence in the Secondary School**
Required for all K-12 and middle school certification. The study of physical, social, emotional, intellectual, and personal development of the 10- to 14-year-old pupil. Application of learning theory to social and educational context of this age group. Dual-listed in the UALR Graduate Catalog as SCED 5379. Three credit hours.

**SCED 4100, 4200, 4300 Independent Study in Secondary Education**
Prerequisite: admission to teacher education program or consent of instructor. An in-depth study of special education problems in the junior or senior high school. One, two, or three credit hours.
The disciplines within the College of Arts, Humanities, and Social Sciences (CAHSS) provide a means for exploring and evaluating the human experience. Through the arts, students learn an awareness of cultural values and gain mastery of materials and techniques needed for aesthetic expression. Study of the humanities and social sciences enables students to examine the significance of behavior, actions, and institutions that define and give meaning to life. Students learn to examine and value people as individuals, as well as collectively within cultures, and to communicate their observations effectively.

A liberally educated student is prepared to meet the challenges of contemporary society and lead a richer and more rewarding life. Graduates in the arts, humanities, and social sciences are acquainted with a broad range of knowledge and cultural expression that enables them to think critically, value learning and culture, and express themselves intelligently. Programs in this college constitute the traditional core of a baccalaureate education and prepare students for advanced study in graduate and professional schools.

In addition to teaching students to adapt, make intelligent choices, think critically, write cogently, and appreciate the arts, the college stresses preparation for specific careers through internships, graduate programs, and field experiences.

The college supports its departments’ systematic assessment of student learning objectives. Although faculty, students, and other stakeholders are the heart of assessment, the college provides additional resources, coordinates assessment reporting and review processes, and serves as a center of accountability to higher levels of university governance.

While the primary focus of the college is instructional, the faculty also engages in research and creative activities and shares a commitment to serve the social, economic, and cultural development of Arkansas.

The college participates with other academic units in numerous interdisciplinary programs and cooperates with the College of Education to offer programs that prepare students for teacher licensure.

UALR’s metropolitan setting provides students in the college with rich opportunities to learn outside the traditional classroom setting. Cooperative programs exist with central Arkansas arts organizations, governmental agencies, health organizations, public schools, and businesses that afford internship and externship experiences for students. Providing ideal laboratories for study and work, these organizations and institutions participate in significant ways in the preparation of students in the College of Arts, Humanities, and Social Sciences as productive citizens. For more information about the CAHSS or its programs, call (501) 569-3296 or access the CAHSS web site at http://www.ualr.edu/cahss/.

Admission Requirements for Majors within the College

For admission to a major within the college, students must meet or exceed eligibility requirements to enroll in RHET 1311 Composition I.

Advising

Malissa Mathis, Student Development Specialist

The College of Arts, Humanities, and Social Sciences offers a comprehensive program of student advisement intended to help students transfer, register, and meet graduation requirements. Although most students will be advised in their major department, all students with special questions regarding their academic program and progress toward their degree should contact this office.

Students interested in applying to UALR who intend to major or minor in a field in this college are also encouraged to consult the College of Arts, Humanities, and Social Sciences student services. Non degree-seeking students who need help selecting courses for personal enrichment are also invited to meet with the student development specialist.

The office of the College of Arts, Humanities, and Social Sciences is in Fine Arts 210. The office is open from 8:00am until 5:00pm and for extended hours by appointment. Telephone: (501) 569-3350 or (800) 340-6509. Interested students can also access the “Student Resources” page of the CAHSS web site at http://www.ualr.edu/cahss/, or email mktrantham@ualr.edu.
Dana Steele, Student Development Specialist for Online Programs

Students interested in the interdisciplinary Bachelor of Arts of Liberal Arts online degree option should contact Dana Steele at (501) 569-3411 or (800) 340-6509, or email djsteele@ualr.edu.

Community College Transfers

Students transferring to UALR from community colleges or junior colleges should contact the student development specialist at (501) 569-3350 or toll free (800) 340-6509, or email mtkrantham@ualr.edu or djsteele@ualr.edu for information about transfer credit for courses and Associate degrees (transfer equivalents for courses from selected schools can be found at http://www.ualr.edu/tca/).

Majors

The college offers majors in studio art, art history, English, French, German studies, history, international studies, liberal arts, music, philosophy, political science, professional and technical writing, psychology, sociology, and theatre arts. Additionally, an online degree option in Liberal Arts is now available. The Departments of Art, English, History, Music, Political Science, and the Department of International and Second Language Studies also offer majors that, in combination with special course requirements and a minor in secondary education, prepare students for licensure in secondary education. For information about these licensure programs, contact the appropriate department of interest.

Minors

Minors are offered in American humanities, anthropology, Arkansas studies, art (studio), art history, creative writing, developmental psychology, English, ethnic studies, film, French, gender studies, geography, German, gerontology, history, industrial psychology, international studies, legal studies, linguistics, medical anthropology/sociology, music, philosophy, philosophy/religious studies, political science, psychology, religious studies, sociology, Spanish, technical theatre (design), theatre arts, theatre dance, urban studies and design, and writing.

Details about interdisciplinary minors follow. Descriptions of all other minors can be found in the program sections in this catalog.

Internships

The internship program allows the student to integrate traditional academic work with real world experience. Internships are defined within the academic department. Admissions and other requirements are set by each department. For more information, contact the academic department through which the internship is desired.

Cooperative Education

UALR participates in cooperative education programs with public and private agencies. Students attend classes part time or on an alternating basis while participating in a paid and credit-bearing internship. For more information contact the Office of Cooperative Education at (501) 569-3584.

Graduate Degree Programs

Graduate programs in applied psychology, art education, art history, gerontology, liberal studies, public history, second languages, studio art, and technical and expository writing are offered in the College of Arts, Humanities, and Social Sciences. In addition, many departments in the College offer graduate courses that can apply toward a graduate degree in education. For more information about graduate degree offerings at UALR contact the Graduate School at (501) 569-3206 or visit the UALR Graduate School web site at http://www.ualr.edu/graddept/.

American Native Press Archives

Daniele F. Littlefield, Jr., director.

The American Native Press Archives is the largest collection of American Indian and Alaska Native newspapers and periodicals in hard copy in the world. The archives consists of nearly a million pieces, covering over a century and a half of native writing on a myriad of subjects. Many tribal publications are included, as well as literary efforts and documents concerning medicine, history, the environment, and other topics.

The archives supports research activities, publishes its newsletter American Native Press, and maintains a web site, which includes the world’s largest electronic database on American Indian writing. The collection provides research support for many programs in the University. Open to students, scholars, and the public, the collection is housed in the University Archives, Ottenheimer Library; materials are available during regular library hours.

Center for Arkansas Studies

The Center for Arkansas Studies promotes the study and teaching of Arkansas history and culture. Its activities include publication of materials about Arkansas, recognition of Arkansas artists and authors, and development of a regional studies program at UALR.

To stimulate scholarship on Arkansas, the center offers the Virginia C. Ledbetter Prize, a $1,000 award given every two years to an outstanding nonfiction book on an Arkansas topic.

Ethnic Studies

Charles Edgley, coordinator.

The ethnic studies minor is an 18 hour interdisciplinary course of study. Its focus is on pluralism, assimilation, and ethnic diversity in the United States. The ethnic studies minor is designed for students whose career options involve working with ethnic groups, and is specifically appealing for students preparing to enter graduate school in the social sciences, international studies, and the humanities.

Requirements for the minor include an introductory course, SOCI 3330 Minority Groups and a three hour capstone senior-level independent study. The independent study is one of the most significant requirements for the minor and can be taken within any department. However, the subject matter must be relevant to ethnic studies. Students must complete SOCI 3330 Minority Groups and 12 elective hours before matriculating the independent study.

Twelve hours are to be chosen from the following courses in consultation with the coordinator of ethnic studies:

ANTH 3312 North American Indians
SOCI 3316 Japanese Culture and Society

HIST 4368 Black History to 1865
HIST 3375 Modern Mexican History
ENGL 3326 African-American Literature I
ENGL 3361 The Film as Literature

Other elective courses may be substituted with prior consent of the coordinator. For more information contact Charles Edgley in the Department of Sociology and Anthropology at (501) 569-3173 or cgedgley@ualr.edu.

Course in Ethnic Studies (ESMP)

ESMP 4300 African-American and Ethnic Studies Seminar

The sociolinguistic development of black language usage. In-depth reading and analysis of the origins of black dialects, the lexical and syntactic development of Afro-typical words and phrases, so-called street talk, slang, and rapping. The main purpose of the course is to provide a historical and literary awareness of the multiplicity of language uses of people of African heritage in the United States. This course will be taught on a rotational basis by ethnic studies faculty members in their areas of specialization. Three credit hours.
American Humanics: Nonprofit Professional Studies

Juliana Flinn, campus director.

American Humanics is a competency-based minor and certificate program designed to prepare and certify students to work for nonprofit organizations. To complete the minor and earn the American Humanics certificate, students must demonstrate that they have acquired the American Humanics competencies. The American Humanics Campus Director is responsible for certifying that a student has acquired the required competencies. Students acquire these competencies through the following:

1. A minimum of 180 contact hours, fulfilled through
   a. 18 hours of approved courses in the minor (see list below)
   b. Participation in approved workshops or seminars;
2. A minimum of 300 hours of internship (for six credit hours)

Recommended courses for students considering this program include PEAW 1300, 2124, and EDFN 1190.

Requirements include: AMHU 1100, AMHU 3300, a Career Development Workshop or approved alternative, AMHU 4301 and 4302 for a total of six credit hours; co-curricular activities including active participation in the American Humanics Student Association and attendance at an American Humanics Management Institute; and three or more electives for a total of at least 8 hours selected from the following:

- ACCT 2310 Principles of Accounting I
- AMHU 4390 Special Topics
- AMHU 4180, 4280, or 4380 Independent Study
- JOUR 4380 Public Relations Writing
- MKTG 3300 Organizational Behavior and Management
- PSYC 4363 Organizational Psychology
- RHET 3316 Writing for the Workplace
- RHET 4375 Grant Writing
- SPCH 3322 Small Group Communication

Gender Studies

Sarah Beth Estes, coordinator.

The gender studies program is an 18-hour interdisciplinary minor. The minor is designed to help students understand and define the changing roles of women and men brought about by social, economic, political, legal, and other changes in society and the interrelationships among gender, class, and race. The gender studies program helps students develop the ability to analyze critically and logically the social construction of gender using theoretical perspectives and interdisciplinary experiences. It also seeks to open minds and consider objections to positive social changes. The gender studies program stresses cross-cultural dimensions and the awareness of community issues.

The program is particularly recommended for students who plan to pursue graduate studies in social sciences, humanities, law, business, and social services, and those whose career choices involve working with women, children, the elderly, and socially disadvantaged people.

Requirements for the minor include an introductory course, 2300; a senior-level seminar, GNST 4300; and 12 hours chosen in consultation with the gender studies coordinator from GNST courses 3315, 3333, 3340, 3346, 3350, 3366, 3388, 4190, 4195, 4290, 4295, 4371, 4372, 4390, and 4395.

Other courses may be accepted with the consent of the coordinator. For more information contact the coordinator at (501) 569-3173, or by email at sbestes@ualr.edu.

Courses in Gender Studies (GNST)

GNST 2300 Introduction to Gender Studies

Recommended prerequisite: RHET 1311. A cross-cultural, interdisciplinary analysis of gender. Includes examination of gender identity, social roles, and cultural symbolism in politics, economics, family, health, socialization, religion, and language. Three credit hours.

GNST 3315 Gender Communication

[See course description for SPCH 3315 Gender Communication.]

Students may also seek American Humanics certification without seeking the minor. It may be possible, for example, to count work experience or internship experience for the major towards the American Humanics certificate, and then only 12 hours of course work might be sufficient for certification, though not the minor. In such cases, the student develops a program with the approval of the American Humanics Campus Director.

Courses in American Humanics (AMHU)

AMHU 1100 Introduction to Nonprofit Professional Studies

The course provides an introduction to the nonprofit or third sector in the US with an emphasis on the historical and philosophical foundations of youth and human service organizations. Topics covered include the roles of nonprofit organizations in meeting human service needs, philanthropic structure of nonprofit organizations, importance of a mission orientation for nonprofit organizations, and possible careers in nonprofit organizations. One credit hour.

AMHU 3300 Management of Nonprofit Agencies

Prerequisites: AMHU 1100; attendance at approved American Humanics workshop, or permission of the instructor. This course is an overview of nonprofit management. Topics include board and committee development, fund-raising principles and practices, human resource development and supervision, general nonprofit management, nonprofit accounting and financial management, nonprofit marketing, program planning, and risk management. It also includes at least one group project and is required for American Humanics minors. Three credit hours.

AMHU 4301, 4302 Internship

Prerequisites: American Humanics minor, senior standing, 2.0 grade point average, and permission of the instructor. The internship requires 150 hours of supervised field experience in a nonprofit organization (50 hours for each hour of credit). It is designed to allow students to further develop their selected certification competencies and may be repeated for up to six hours of credit.

AMHU 4180, 4280, 4380 Independent Study

Prerequisite: consent of American Humanics director. Advanced assignments in selected areas.

AMHU 4390 Special Topics

Selected topics in nonprofit professional studies. Three credit hours.

- GNST 3318 Sexuality, Society, and Culture
  [See course description for ANTH 3318 Sexuality, Society, and Culture.]
- GNST 3333 Women in a Changing Society
  [See course description for SOCI 3333 Women in a Changing Society.]
- GNST 3340 Women in Literature
  [See course description for ENGL 3340 Women in Literature.]
- GNST 3346 Sociology of the Family
  [See course description for SOCI 3346 Sociology of the Family.]
- GNST 3350 Family Violence
  [See course description for SOCI 3350 Family Violence.]
- GNST 3366 Psychology of Women
  [See course description for PSYC 3366 Psychology of Women.]
- GNST 3388 Kinship and Descent
  [See course description for ANTH 3388 Kinship and Descent.]
- GNST 4300 Gender Studies Senior Seminar
  Prerequisite: GNST 2300. Taught on a rotating basis by gender studies faculty members in their area of specialization. Three credit hours.
- GNST 4371 Women in World History
  [See course description for HIST 4371 Women in World History.]
- GNST 4372 Perspectives on Women in American History
  [See course description for HIST 4372 Perspectives on Women in American History.]
- GNST 4190, 4290, 4390 Independent Study
  Prerequisites: 15 hours of gender studies courses including GNST 2300 or consent of instructor. Selective reading and formal written project on a topic must be submitted by the student and approved by the coordinator before registration. Credit is determined at the beginning of the semester. One, two, or three credit hours.
- GNST 4195, 4295, 4395 Internship
  Prerequisites: 15 hours of gender studies courses including GNST 2300 or consent of director. Students are assigned an internship in the community. The objective is for students to apply theoretical perspectives to real world situations. Credit is determined at the beginning of the semester. Each hour of credit requires at least 30 hours of supervised work during the semester. One, two, or three credit hours.
Geography
Gerald H. Luebeck, coordinator.

A geography minor consists of 18 hours, including two courses chosen from GEOG 1310 World Economic Geography, GEOG 1311 Introduction to Physical Geography, or GEOG 2312 Cultural Geography, plus 12 additional hours of geography courses. See “Minor in Geography” on page 67 for detailed information on course work and requirements for this minor, or contact the coordinator at (501) 569-8730 or gthanso@ualr.edu.

International Studies Program
Jacek Luebecki, coordinator

The international studies program embraces an interdisciplinary curriculum which emphasizes global awareness in preparation for careers in international service. It enhances the development of advanced foreign language and communication skills and offers crucial insights into the scope of international and global problems.

The international studies curriculum is designed for students interested in seeking employment with a U.S. agency or company involved in international affairs, or attracted to work experience overseas. Military and diplomatic service, commercial enterprises, educational agencies, and development and human rights organizations offer opportunities for persons well-versed in global concerns. In addition, the international studies major provides a solid foundation for potential graduate study in the social sciences, the humanities, journalism, and international business and law.

Because of the rigorous nature and the complexity of this curriculum, students are encouraged to contact the international studies coordinator during their freshman year to become familiar with the program and to discuss a feasible course of study.

Admission Requirements
Prerequisites for formal admission to the international studies program include having a cumulative grade point average of 2.50 and completion of the following courses:

RHET 1311 Composition I
RHET 1312 Composition II
HIST 1311 History of Civilization I
HIST 1312 History of Civilization II
GEOG 2310 World Regions or GEOG 2312 Cultural Geography
FREN, GERM, or SPAN 1311, 1312 (or equivalent)
ECON 2301 Survey of Economics

Additional prerequisites for students seeking an international studies degree with a business emphasis include:

ECON 2322 Principles of Microeconomics
ECON 2323 Principles of Macroeconomics
MKTG 2380 Legal Environment of Business

Area of Concentration

Upon being admitted to the program, students choose to concentrate their studies in the public or the private sector. While socio-cultural and geopolitical interaction will be part of both curricula, the private track deals more extensively with international market forces and economic systems.

Major in International Studies

The international studies program comprises a major/minor consisting of 48 hours (including 36 upper-level hours). The curriculum is divided into a set of core courses and an area of concentration.

Area of Concentration

In addition to the core courses the student will select an area of concentration. Options include Latin America, Europe, a private track emphasis, or an area designed by the student with the advisor’s approval. Possible choices are East Asian Studies, International Women’s Issues, or a diplomatic, environmental, or developing nations emphasis. The area concentration consists of 18 hours of thematically clustered courses from various academic disciplines, an advanced foreign language course in culture or literature, an internship or cooperative education work experience, and a senior paper connected with the student’s specialization.

Minor in International Studies

The minor in international studies is designed for students who have an interest in foreign cultures and global affairs and would like to complement their major or career related field with foreign language and international skills.

The international studies minor consists of 21 hours. Students must complete an intermediate foreign language course (2311 or above), INTS 2301 and 2302, and 12 hours of related upper-level courses chosen in consultation with the international studies coordinator.

International Studies

Core Requirements (44 hours)¹
Second Language Proficiency²

International Studies Core (18 hours)

FREN, GERM, or SPAN 2311, 2312, & 3311 or equivalent proficiency
INTS 2301 World Cultures
INTS 2302 Global Issues
SPCH 4312 Intercultural Communication
INTS 4350 Internship
INTS 4101, 4102, & 4103 Senior Research Project

Area of concentration (30 hours)

Public Sector Track

FREN 3334, 3335, 3336, GERM 3334, or SPAN 3334, 3335, or equivalent proficiency
POLS 3360 Comparative Government: Western
or POLS 3370 Comparative Politics: Developing Areas
or POLS 4340 International Relations

Private Sector Track

FREN 3334, 3335, or 3336, GERM 3334, SPAN 3334, or 3335, or equivalent proficiency
MKTG 3350 Principles of Marketing
STAT 2350 Introduction to Statistical Methods or ECON 2310 Business Statistics ³
Two courses (6 hours) of restricted electives (in cultural/political area)

Three courses (9 hours) of International business electives ⁴
ADVT 4370 International Promotion Management and Public Relations
ECON 4320 International Economics
FINC 4330 International Finance
MGMT 4377 International Business Management
MKTG 4320 International Marketing
MKTG 4381 International Business Transactions

Electives (14-20 hours)

1. See “Core Requirements for Bachelor Degrees” on page 27.
2. See “Second Language Requirement” on page 27.
3. MATH 1342 is a prerequisite.
4. Possible options listed. Courses chosen in consultation with the international studies coordinator.
Courses in International Studies (INTS)

INTS 2301 World Cultures
A study of traditional culture of major world areas emphasizing values and systems that lead to cultural unity and cultural diversity, followed by a study of the modernization of each culture and the extent to which the cultures have interacted and changed as a result of intercultural contact during the 19th and 20th centuries. Three credit hours.

INTS 2302 Global Issues
A study of issues of concern throughout the modern world, the reaction of cultural entities to those issues, global dynamics, and the ways in which international assessments are made. Three credit hours.

INTS 3321 Topics in Modern International Cultures
Modern institutions and lifestyles in cultures selected from the major regions of Europe, Asia, Africa, and Latin America. The course emphasizes different patterns of behavior found in cultural areas outside the U.S. The specific focus of the course will vary from time to time. It may be repeated for credit if the content is different. Three credit hours.

INTS 3350, 3351 Cooperative Education Work Experience I and II
Prerequisites: major in international studies, INTS 2301, 2302, ECON 2321, FREN, GERM, or SPAN 2312, at least six upper-level required international studies hours, basic computer literacy, and consent of the international studies coordinator. Designed to complement and extend the classroom learning experience through application of theoretical concepts in a professional work environment with an international dimension. The exact number of work hours, activities, and responsibilities is dependent on the nature of the work experience and must be specified in a written agreement between employer and student in coordination with the Office of Cooperative Education. Three credit hours.

INTS 4101 Senior Research Project
Proposal. Required for international studies majors. An independent research project that is completed over two semesters under the guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4101), a formal paper (4102), and an oral presentation (4103), each providing one hour of academic credit. A student may enroll in INTS 4101, 4103 only after completing an acceptable proposal (INTS 4101) in the previous semester. One credit hour.

INTS 4102 Senior Research Project
Formal Paper. Required for international studies majors. An independent research project that is completed over two semesters under the guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4101), a formal paper (4102), and an oral presentation (4103), each providing one hour of academic credit. A student may enroll in INTS 4102, 4103 only after completing an acceptable proposal (INTS 4101) in the previous semester. Three credit hour.

INTS 4103 Senior Research Project
Oral Presentation. Required for international studies majors. An independent research project that is completed over two semesters under the guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4101), a formal paper (4102), and an oral presentation (4103), each providing one hour of academic credit. A student may enroll in INTS 4102, 4103 only after completing an acceptable proposal (INTS 4101) in the previous semester. One credit hour.

INTS 4300 Seminar
An integrative, in-depth study of a specified regional problem or global issue, related to the area of concentration, requiring analysis of traditional values and current issues and problems. Three credit hours.

INTS 4350 Internship
For international studies majors or minors. Field experience with businesses, industries, and agencies involved in the international arena. Supervised by the company or agency and a faculty member. Students are expected to apply theoretical concepts to active world situations and develop appropriate working skills and experience. Credit, no credit grading available on request. Three credit hours.

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Legal Studies
Neil Snortland, coordinator.

The legal studies minor provides the opportunity to develop a greater understanding of law and legal institutions. The program is broadly humanistic, giving students a general knowledge of the institutional, philosophical, and historical character of the legal system. Course work in the program is designed to help students understand and use written and spoken language, to foster a critical understanding of the human institutions and values with which the law deals, and to stimulate creative thinking.

A minor in legal studies is not designed specifically to prepare a student for law school; the best preparation is an undergraduate curriculum that requires you to investigate information, analyze it, and explain your conclusions clearly. Most often a broad liberal arts background is the best preparation for these tasks. See “Prelaw Studies” on page 37 for further information about preparation for law school, or contact the pre-law advisor, Dr. Charles Chastain, in the criminal justice department at (501) 569-3195.

The minor requires 18 hours, which must be approved by the coordinator. No more than nine hours may be chosen from any one discipline. The student’s individual needs and interests are important considerations in the course selection process. This minor may also be chosen as one of the concentrations in the bachelor of arts in liberal arts curriculum.

Before beginning the program students must be advised by the coordinator and receive a list of approved courses for the minor. Each student must complete one three-hour independent research project, subject to the approval of the coordinator. Credit for this project will be provided by any independent study or equivalent course offered in the college or, if applicable, an internship or field-study program. For more information contact the coordinator in the political science department at (501) 569-3331 or nesnorland@ualr.edu.
The Department of Art, accredited by the National Association of Schools of Art and Design, offers undergraduate instruction leading to baccalaureate degrees in art history, studio art (fine arts track), studio art (applied design track), and art education. The art history program emphasizes all eras of western European art and selected non-Western subjects. The fine arts track offers specialization areas in drawing, painting, graphic design, illustration, photography, ceramics, printmaking, and sculpture. The applied design track offers specialization areas in furniture design, fibers, metals and functional ceramics. Courses in crafts and museum studies are also offered. The department also makes available numerous courses in art education, art history, and studio art for students not majoring in art who are interested in art electives. Minors are available in art history, studio art, photography, and digital graphics.

To enrich the instructional program, the department offers continuous exhibits in three galleries in the Fine Arts Building and enjoys a cooperative relationship with the Arkansas Arts Center. Two art student organizations, The Association of Student Artists and The Clay Guild, are available to any student artist.

Arkansas Arts Center

The Department of Art collaborates with the Arkansas Arts Center to offer cooperative programs that benefit the public and academic communities. The Arts Center serves as an important teaching resource by providing outstanding national and regional exhibitions. On occasion, special studio workshops are offered by respected visiting artists from throughout the United States. The museum studies course is taught at the Arkansas Arts Center.

Art Advisors

The department has advisors for both undergraduate and graduate students. Undergraduates should contact Professors Marjorie Williams-Smith, Jane Brown, or Floyd Martin at (501) 569-3182 for assistance with their academic programs. Students interested in public school teaching should contact Professor Bonnie Black at (501) 569-3146. Undergraduate students who have completed a minimum of 100 academic credits should contact Professor Aj Smith at (501) 569-3182.

Transfer Students

Students transferring to UALR who intend to major in art should contact the department before enrolling to arrange for advising. Students may be required to take additional hours in areas where deficiencies are noted. Transfer students must complete at least nine hours of their studio concentration at UALR. For example, a student who has 15 hours accepted in transfer credit for painting must complete an additional nine hours of painting at UALR if painting is the studio concentration.

Bachelor of Arts in Studio Art—Fine Arts Track

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Courses</th>
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| Core Requirements (44 hours)² | ARST 3360 Sculpture I  
ARST 3370 Photography I |
| Second Language Proficiency³ | Art History Electives (6 hours)  
Two ARHA courses (excluding 2200, 4302) |
| Foundations Courses (21 hours) | Art Studio or Art History Electives (3 hours)  
One upper-level course in art studio or art history (excluding ARHA 4302) |
| Level-1 Studio Courses (21 hours) | Studio Concentration (15 hours)  
Four advanced courses in one studio discipline plus ARST 4397 Capstone in the Visual Arts or Internship within the primary studio discipline |
|  | Senior Show  
Senior Portfolio  
Oral presentation, written statement, and a sleeve of 20 slides of recent work |
| General Electives (14 hours) | |

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1. No grade less than C will be accepted in any art course required within any art major or minor.
2. See “Core Requirements for Bachelor Degrees” on page 27.
Bachelor of Arts in Studio Art—Applied Design Track

Core Requirements (44 hours)
Second Language Proficiency
Foundations Courses (27 hours)
ARST 1310 Basic Drawing
ARST 1315 Two-Dimensional Design
ARST 2310 Figure Drawing
ARST 2315 Three-Dimensional Design
ARST 2318 Designing with New Technologies
ARHA 2310 Survey of the History of Art I
ARHA 2311 Survey of the History of Art II
ARHA 2312 Survey of Non-Western Art
ARHA History of Design

Level-1 Studio Courses (15 hours)
ARST 3312 Crafts I
ARST 3340 Graphic Design I
ARST 3350 Ceramics I
ARST 3360 Sculpture I

Bachelor of Arts in Art History
Floyd Martin, coordinator.

The bachelor of arts in art history is for students especially interested in the history, theory, and criticism of the visual arts. The major will provide a solid foundation for students who wish to pursue the master or Ph.D. programs in art history that are necessary for careers in university teaching, research, and the museum field. For those pursuing other interests, the major in art history, which is decidedly a liberal arts field, encourages development of analytical and critical viewing and writing skills useful in such careers as law, medicine, and business.

Students should plan carefully and check the long-range schedule of course offerings with the art history coordinator if interested in a particular course. ARHA 2310 Survey I and ARHA 2311 Survey II are offered fall and spring. Upper-level courses are normally offered once every two years. No grade less than C will be accepted in any art course required within any art major or minor.

Bachelor of Arts in Art History

Core Requirements (44 hours)
Second Language Proficiency
Survey courses (9 hours)
ARHA 2310 Survey of the History of Art I
ARHA 2311 Survey of the History of Art II
ARHA 2312 Survey of Non-Western Art

Four courses from the following (12 hours)
ARHA 3304 Medieval Art
ARHA 4304 Ancient Art
ARHA 4305 Italian Renaissance Art
or ARHA 4306 Renaissance Art in Northern Europe
ARHA 4384 Baroque Art
ARHA 4307 Eighteenth and Nineteenth-Century Art in Europe
ARHA 4387 Late Nineteenth- and Early Twentieth-Century Art in Europe
ARHA 4308 Twentieth-Century Painting, Sculpture, and Graphic Arts Since 1945

Art History electives (6 hours)
Two upper-level courses selected with the art history coordinator

One seminar course (3 hours)
ARHA 4385 Seminar in Italian Renaissance and Baroque Art
ARHA 4386 Problems in Northern European Renaissance and Baroque Art
ARHA 4388 Problems in Modern Art
ARHA 4310 Special Topics in Art History

One upper-level course in a non-Western area (3 hours)
Methods and Theory course (3 hours)
ARHA 4300 Studies in the History of Art
Capstone—Art History (2 hour)
ARHA 4297 Capstone in Art History

Studio Art (9 hours)
ARST 1310 Basic Drawing
ARST 1315 Two-Dimensional Design
One additional studio elective

Minor (18 hours)

General Electives (15 hours)

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1. No grade less than C will be accepted in any art course required within any art major or minor.
2. See “Core Requirements for Bachelor Degrees” on page 27.
4. It is recommended that RHET 1311, RHET 1312, HIST 1311, and HIST 1312 be taken before or concurrently with ARHA 2310 and ARHA 2311.
Senior Show for Studio Art Majors

Studio majors in the last semester of their senior year are required to register for ARST 4397 Capstone in the Visual Arts. As part of course requirements, students will prepare an exhibit of their work. The senior show will be scheduled by the gallery curator, and must be approved by the student’s major advisor, academic advisor, the gallery curator, and the department chairperson. Each student must also give an oral presentation in the form of a gallery talk, presentation to a class, or other format. The oral presentation will be scheduled and approved by the ARST 4397 faculty of record, major advisor, and, if appropriate, also by the gallery curator. The Department of Art, with student approval, occasionally selects outstanding student work to add to its teaching collection.

Senior Portfolio for Studio Art Majors

As part of a student’s capstone requirements, studio majors will prepare a portfolio of 20 images documenting their senior show and other work, along with a written artist’s statement (three to six pages double-spaced). Portfolio images may be presented as 2 x 2 color slides or in a CD format. This portfolio must be approved by the ARST 4397 faculty of record, the major advisor and department chair. The portfolio will be due one week before the last class day, and will become the property of the Department of Art.

Senior Paper for Art History Majors

Art history majors in the last semester of their senior year are required to register for ARHA 4297 Capstone in Art History. As part of capstone requirements, students will write a senior paper, which will also be given orally. The paper must be approved by the student’s major advisor, ARHA 4297 faculty of record, academic advisor, and the art history coordinator. The oral presentation may be in the form of a public lecture, presentation to a class, or a paper at a scholarly meeting.

Senior Portfolio for Art History Majors

Art history majors enrolled in ARHA 4297 are required to prepare a portfolio of their senior paper and three other papers written for classes while at UALR. This portfolio must be approved by the major advisor, ARHA faculty of record, and the art history coordinator. The portfolio will be due one week before the last class day, and will become the property of the Department of Art.

Minor in Art History

A minor in art history consists of 18 hours in art history, including ARHA 2310, 2311, and 12 hours of electives, excluding ARHA 2200 and FNAR 2300, 2301. No grade less than C will be accepted in any art course required within any art major or minor.

Courses in Art Education (ARED)

ARED 3245 Public School Art

An investigation of elementary-level art education focusing on materials and methods for teaching art history, art criticism, and studio production to children. Attention is given to the relationship of the visual arts to general education, developmental growth of children in art, curriculum planning, and current issues in art education. This course is offered for preprofessional teachers in the College of Education’s Early Childhood Education program. Two credit hours.

ARED 3316 Teaching Art in the Secondary School

Methods and materials for teaching art in the secondary school. (See “Secondary Teacher Licensure” on page 45.) Three credit hours.

ARED 3345 Public School Art

An investigation of elementary-level art education focusing on materials and methods for teaching art history, art criticism, and studio production to children. Attention is given to the relationship of the visual arts to general education, developmental growth of children in art, curriculum planning, and current issues in art education. Three credit hours.

ARED 4325 Foundations in Art Education

A survey of the history of art education with an emphasis on the changing philosophies, theories of learning, and the subsequent goals and objectives made apparent in curriculum development. Dual-listed in the UALR Graduate Catalog as ARED 5325. Three credit hours.

ARED 4194, 4294, 4394 Independent Study

Prerequisite: consent of instructor. Research on a subject selected in consultation with the instructor. Admission to this course must be approved by the art education advisor before registration. May be taken for one, two, or three hours credit.

Minor in Studio Art

A minor in studio art consists of 18 hours to include 6 hours of drawing, 6 hours of design, and 6 hours of upper-level electives in studio work. No grade less than C will be accepted in any art course required within any art major or minor.

Art History Major/Studio Art Minor

Students may choose to major in art history and minor in studio art. Since ARST 1310 Basic Drawing, ARST 1315 Two-Dimensional Design, and three studio elective credits are included in the art history major, students choosing this program will also complete ARST 2310 Figure Drawing, ARST 2315 Three-Dimensional Design, and two upper-level studio art courses. These hours may be in one discipline (e.g. Painting I, II) or selected concentrations (e.g. Painting I, Ceramics I).

Minor in Digital Graphics

The minor in digital graphics is open to all majors and makes it possible for non-degree seeking students and non-art majors to select an industry specific minor in the arts. The curriculum for the minor consists of 18 hours in studio art, including ARST 1310, 1315, 2318, 3585, 3586, and 4346. No grade less than C will be accepted in any art course required within any art major or minor.

Art Courses as Electives

Studio Art

Nonart majors may elect to take studio art foundations courses numbered ARST 1310, 1315, 2310, 2315, and 2318. Although the department recommends that courses be taken in sequence, students may enroll in any of the Studio I courses (e.g., ARST 3320 Painting I, 3360 Sculpture I, 3370 Photography I, etc.) on either a pass/fail or grade basis.

Art History

Students who have training in related disciplines that prepare them for advanced art history courses (for example, history, English, and religious studies), may elect advanced courses in art history without taking ARHA 2310 and 2311. Students in doubt about their preparedness for art history should consult an art history instructor.

Secondary Teacher Licensure

See “Secondary Teacher Licensure” on page 45 for details and contact Dr. Bonnie Black in the Department of Art about the curriculum.
Courses in Art History (ARHA)

Courses in Studio Art (ARST)

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ARST 3310 Advanced Drawing I
Prerequisite: ARST 2310. An advanced course with emphasis on invention and personal creative investigation. Three credit hours.

ARST 3312 Crafts I
Prerequisite: ARST 2315. The application of two- and three-dimensional design principles to projects in enameling and jewelry making. Three credit hours.

ARST 3320 Painting I
Prerequisites: ARST 1310, 1315; or consent of instructor. Introduction to painting in oil from still life, landscape, the figure, and other subject matter. Three credit hours.

ARST 3321 Painting II
Prerequisite: ARST 3320. Exploration of expressive painting in choice of media. Three credit hours.

ARST 3322 Watercolor I
Prerequisite: ARST 3320. Development of skills in watercolor painting, using transparent and opaque pigments. Three credit hours.

ARST 3330 Printmaking I
Prerequisites: ARST 1310, 1315. Introduction to woodcut and etching-intaglio. Three credit hours.

ARST 3331 Printmaking II
Prerequisite: ARST 3330. Introduction to silk-screen and lithography. Three credit hours.

ARST 3340 Graphic Design I
Prerequisites: ARST 1310, 2310; 1315; or consent of instructor. Instruction in the aesthetic, creative, and technical aspects of graphic design. Three credit hours.

ARST 3341 Graphic Design II
Prerequisite: ARST 3340 or consent of instructor. Instruction in the production aspects of graphic design, i.e., type spacing, mechanicals, color separation, printing procedures, etc. Three credit hours.

ARST 3343 Graphic Design Principles
An introduction to basic art and graphic design theory. Emphasis on the knowledge and ability to work with advertising artists. Art majors may not take this course for credit. Students are advised to take ADVT 3300 as background. Three credit hours.

ARST 3350 Ceramics I
An introductory course in creative clay processes. Emphasis on hand-building techniques and basic glazing and glaze preparation. Three credit hours.

ARST 3351 Ceramics II
Prerequisite: ARST 3350. Further study in the medium of clay, with emphasis on the use of the potter’s wheel. Introduction of reduction glazes and firing of the kiln. Three credit hours.

ARST 3360 Sculpture I
Prerequisite: ARST 3315. Basic additive, subtractive, reproductive, and fabricative procedures in problems using clay modeling, wood or stone carving, mold making, plaster casting, and steel welding. Three credit hours.

ARST 3361 Sculpture II
Prerequisite: ARST 3360. Clay, plaster, and wax studies from the human head and figure, including mold making and casting techniques. Three credit hours.

ARST 3370 Photography I
The basic tools, materials, and techniques of black and white photography. The assignments are designed to develop skill in camera operation and darkroom processes, with emphasis on the aesthetics of design, personal expression, and communication for the fine artist and graphic designer. Three credit hours.

ARST 3371 Photography II
Prerequisite: ARST 3370. An overview of various modes of photographic expression, including documentary, metaphorical, directorial, and conceptual imagery. Students continue to develop technical skills using black and white materials. Three credit hours.

ARST 3380 Illustration I
Prerequisites: ARST 1310, 1315, 2310; or consent of instructor. Instruction in academic drawing theory with emphasis on three-point and curvilinear perspective, as well as simulation of volume and space. Three credit hours.

ARST 3381 Illustration II
Prerequisite: ARST 3380 or consent of instructor. ARST 3320 Painting I is recommended. Instruction in academic painting theory with emphasis on simulation of volume and space through hue, value, and chroma. Three credit hours.

ARST 3385 Vector Graphics for Illustrators and Designers
Prerequisite: ARST 2318 or consent of the instructor. A study of computer illustration software covering the most popular vector illustration programs in use today. Emphasis on aesthetic judgment and technical proficiency in developing works of art for illustration and design portfolio. Three credit hours.

ARST 3386 Digital Imaging for Illustrators and Designers
Prerequisite: ARST 2318 or consent of the instructor. Professional Studio techniques in Adobe Photoshop® and supplemental programs. Emphasis is placed on technical proficiency and production techniques for print and web site design. Three credit hours.

ARST 4310 Advanced Drawing II
Prerequisite: ARST 3310 or consent of instructor. Exploration of perceptual and conceptual issues in drawing, including study of contemporary artists and trends to stimulate self-directed projects. Three credit hours.

ARST 4311 Advanced Drawing III
Prerequisite: ARST 4310 or consent of instructor. A continuation of issues introduced in Advanced Drawing II. Students will continue to expand their work in the context of current issues, aesthetic trends, and the current cultural milieu. Three credit hours.

ARST 4312 Advanced Drawing IV
Prerequisite: ARST 4311 or consent of instructor. The focus of this course is the culmination of previous research and self-directed study in drawing and preparation of works for the senior exhibition. Three credit hours.

ARST 4315, 4215, 4315 Advanced Problems in Design
Experimental materials and techniques in two- and three-dimensional design, including the correlation of visual design elements with those of various multidimensional work not usually covered by normal course offerings. Course content, subtitle, and organization vary. One, two, or three credit hours.

ARST 4320 Painting III
Prerequisite: ARST 3321. A beginning opportunity for the development of personal imagery and concepts in parallel development with continuing materials skills. Three credit hours.

ARST 4321 Painting IV
Prerequisite: ARST 4320. An advanced opportunity for personal painting investigation. Three credit hours.

ARST 4322 Watercolor II
Prerequisites: ARST 3320, 3322. Continuation of ARST 3322. Emphasis on experimental and expressive techniques in watercolor. Three credit hours.

ARST 4323 Painting V
Prerequisite: ARST 4321. Students will study various directions and concepts in painting while focusing on the establishment of an individual painting philosophy. Three credit hours.

ARST 4324 Painting VI
Prerequisite: ARST 4323. A continuation of previous research and self-directed study in painting, as well as preparation of works for the senior exhibition. Three credit hours.

ARST 4330 Printmaking III
Prerequisites: ARST 3330, 3370. Color printmaking and photo techniques. Three credit hours.

ARST 4331 Printmaking IV
Prerequisite: ARST 4330. Instruction in advanced etching-intaglio techniques to include traditional methods, simultaneous multiple color printing, and multiple plate processes. Technical analysis of professional artist’s prints will be integrated into the course. Three credit hours.

ARST 4332 Printmaking V
Prerequisite: ARST 4330 or consent of instructor. Instruction in new technological developments in fine arts printmaking to include edition printing methods and print publishing practices. Course offerings will remain current with the advancement of new technologies. Three credit hours.

ARST 4340 Graphic Design III
Prerequisite: ARST 3341 or consent of instructor. Instruction in varied aspects of graphic design theory, with emphasis on visual communication, client restrictions, and deadlines. Three credit hours.

ARST 4341 Graphic Design IV
Prerequisite: ARST 4340 with a B or greater or consent of instructor. Advanced graphic design theory with emphasis on work assignments from clients in the community and creation of a portfolio for employment. Three credit hours.

ARST 4348 Production Design for the Internet
Prerequisite: ARST 2318 or consent of the instructor. A study of computer software as tools for the graphic designer in the web design industry. Students complete a series of projects illustrating the different design and production capabilities of individual software programs and their interrelationships. Students produce a variety of projects, from small scale graphics to complete web sites. Three credit hours.

ARST 4350 Ceramics Techniques
Prerequisite: ARST 3351. Emphasis on clay as an expressive medium, stressing sculptural rather than functional concepts. Continued experience with glazes and kiln firing. Three credit hours.

ARST 4351 Intermediate Ceramics Studio
Prerequisite: ARST 4350 or consent of instructor. An advanced ceramics course with emphasis on creative use of clay as a sculptural medium; continued experience with glazes and kiln firing. Three credit hours.

ARST 4352 Advanced Ceramics Studio
Prerequisite: ARST 4351 or consent of instructor. Ceramics for the advanced art student. Continued study in ceramics as a creative sculptural medium rather than functional uses of clay. Advanced study in kiln construction, firing, and glazing techniques, such as salt glazes. Three credit hours.

ARST 4360 Sculpture III
Prerequisite: ARST 3360. Explorations in kinetics, sound and light sculpture. A multimedia approach stressing contemporary issues in the field. Three credit hours.
ARST 4361 Digital Color Photography
Prerequisite: ARST 3360. Environmental and site-specific sculpture, employing photographs of urban and outdoor sites, maquette making, and montage. Three credit hours.

ARST 4362 Sculpture V
Prerequisite: ARST 3361. Preparation for hot-metals casting. Includes wax pattern making, spraying and venting, ceramic shell, and investment mold making. Three credit hours.

ARST 4363 Sculpture VI
Prerequisite: ARST 4362. Investment burnout, casting in aluminum or bronze, divestment, chasing, and patination procedures. Completes preparatory work begun in Sculpture V. Three credit hours.

ARST 4370 Professional Photo Techniques
Prerequisites: ARST 3370, ARST 3371. Overview of the skills required for successful portrait, commercial, and architectural photography. Professional equipment is provided. May be repeated once for additional credit. Three credit hours.

ARST 4371 Alternative Photo Methods
Prerequisites: ARST 3370, ARST 3371. Exploration of alternative methods of photographic image making. Assignments challenge each student to question traditional techniques and materials. Three credit hours.

ARST 4372 Digital Color Photography
Prerequisites: ARST 3370, ARST 3371. An introduction to digital photography using traditional color films and digital printing techniques. Emphasis on the expressive use of color. Students use traditional cameras. Digital printing facilities are provided. Three credit hours.

Courses in Studio Art - Applied Design Track (ARAD)

ARAD 3301 Introduction to Blacksmithing
Prerequisites: ARST 2315 and ARST 3360. This course will focus on basic blacksmithing techniques such as how to light a coal fire, connecting multiple pieces of stock using traditional blacksmithing processes, basic forging skills and a working knowledge of how to properly operate all equipment in the studio. Three credit hours.

ARAD 3302 Introduction to Jewelry and Metalsmithing
Prerequisites: ARST 2315 and ARST 3360. This course will teach basic metalsmithing and jewelry making techniques. Craftsmanship and problem solving will be strongly emphasized. Students will expand their ability to effectively speak about their work and evaluate the work of others. Three credit hours.

ARAD 3303 Introduction to Furniture Design
Prerequisites: ARST 1310 and ARST 2315. A beginning course in the fundamentals of furniture design and construction. Students will design multiple furniture items and develop working drawings and scale models; learn basic material selection; and employ appropriate wood joinery and finishing. The course will require the use of hand and power tools while constructing a basic freestanding bench and table. Three credit hours.

ARAD 3305 Surface Design
Prerequisites: ARST 2315 and ARST 3312. This course is designed to teach surface design techniques on fabric and other fiber surfaces used in production fibers. Students will develop surface design techniques including but not limited to the use of stamping, silk-screening bases, discharge dyes, fabric paint, beading, and collage. Three credit hours.

ARAD 3306 Introduction to Weaving
Prerequisites: ARST 2315 and ARST 3312. This course will teach basic off-loom and loom weaving techniques. Students will learn the basic steps in the weaving process, selection of yarns, reading pattern drafts and finishing techniques. A historical perspective of weaving will be included along with research of fiber artists. Three credit hours.

ARAD 3307 Functional Ceramic Techniques and Technology
Prerequisite: ARST 3331. This course focuses on the exploration of functional ceramics through a variety of advanced forming and finishing techniques to assist with a production oriented studio methodology. By using traditional based processes, students will build a greater proficiency in ceramic firing, and clay and glaze technology for functional ware. Three credit hours.

ARAD 3308 Ceramic Design
Prerequisite: ARAD 3307. This course focuses on technical and professional skills needed to maintain a crafts studio. Glazing and firing proficiency specific for an active production studio will be explored. This research experience will provide students the background for what is needed to become a working crafts person in the ceramic field. The course will be a concentrated investigation of craft theory and self-initiated projects to build a personal approach to utilitarian ceramics. Three credit hours.

ARAD 4373 Advanced Problems in Photography
Prerequisites: ARST 4370, ARST 4371, ARST 4372 or permission of the instructor based upon demonstrated equivalent experience. The further exploration of concepts introduced in other photography courses. Individual assignments based on each student’s previous experience and interest. May be repeated for additional credit. Three credit hours.

ARAD 4380 Illustration III
Prerequisite: ARST 3381 or consent of instructor. Instruction in varied aspects of illustration theory with emphasis on individual style, client restrictions, and deadlines. Three credit hours.

ARAD 4381 Illustration IV
Prerequisite: ARST 4380 with B or greater or consent of instructor. Advanced illustration theory with emphasis on work assignments from clients in the competitive and creative aspects of the profession. Three credit hours.

ARAD 4192, 4292, 4392 Independent Study
Open only to the advanced student who seeks to do special research on a subject selected in consultation with the instructor. Admission to this course must be approved by the art department before registration. One, two, or three hours.

ARAD 4397 Capstone: Studio Art
This course provides the capstone experience for senior art studio majors. Course includes career analysis, gallery portfolio presentation, photographing art, packing and shipping art, a mock interview or a project proposal presentation and the development of a resume, an artist statement and a gallery talk. Three credit hours.

ARAD 4301 Intermediate Blacksmithing
Prerequisite: ARAD 3301. This course will explore the many possibilities of what blacksmithing can be in contemporary forge work. An emphasis will be placed on the use of traditional techniques whenever possible. Various hot forging methods, fabrication processes, welding and limited use of machining methods will be explored. Three credit hours.

ARAD 4302 Intermediate Jewelry and Metalsmithing
Prerequisite: ARAD 3303. This course will explore the creative potential of jewelry and metalsmithing through traditional and non-traditional techniques. Emphasis will be placed on craftsmanship, complex soldering operations and mechanical joining as well as sheetmetal forming and wire forging. Surface embellishment and a variety of finishing techniques will be used to create distinctive final pieces. Three credit hours.

ARAD 4303 Case Furniture Design and Construction
Prerequisite: ARAD 3303. An advanced course in furniture design and construction. Students will be introduced to basic wood box and cabinet design and construction. Students will design multiple furniture items and develop working drawings and scale models, practice appropriate material selection; and employ complex wood joinery and finishing. The course will require the use of hand and power tools while constructing a free standing shelving unit and a wall mounted or free standing cabinet with doors and drawers. Three credit hours.

ARAD 4304 Complex Furniture Design and Construction
Prerequisite: ARAD 4303. An advanced course in complex furniture design and construction. Students will be introduced to ergonomic considerations in the design and construction of a chair. Students will develop working drawings and a scale model; practice appropriate material selection; and employ complex wood joinery and appropriate finishing. The course will require the use of hand and power tools while constructing a chair of unique or historical design integrating at least one material in addition to wood. Three credit hours.

ARAD 4306 Intermediate Weaving
Prerequisite: ARAD 3306. This course will include multi-harness loom weaving techniques. Students will learn advanced weaving processes, selection of yarns, reading and designing pattern drafts and finishing techniques. Use of computer-assisted draft designs and weaving on a comput-robotic production loom will be included in this course. A historical perspective of weaving will be included along with research of fiber artists. Three credit hours.

ARAD 4307 Ceramics Studio Practice
Prerequisite: ARAD 3308. This course will allow students to concentrate on the production of a body of functional ceramics. This approach will enable students to create a personal body of work and documented portfolio that is applicable for the consumer market. Within this continued research, students will generate and exhibit an independent studio practice and work ethic that will sustain craftsmanship and creative development while refining efficiency and focus on a mature line of marketable work. Three credit hours.

ARAD 4398, 4698 Applied Design Internship
Prerequisite: Departmental approval. This experience will provide students with a supervised, practical experience to put into practice the skills learned in the academic setting. It will develop aspects of the art profession appropriately learned in real work situations. It will provide an opportunity for art students to work under the supervision of a professional artist. Three or six credit hours.
DEPARTMENT OF ENGLISH

SH 501
569-3161
569-8185 (fax)
Chairperson:
Murphy, Russell E., professor
Professors:
Anderson, W. Steve
Burns, Ralph M.
Jauss, David R.
Knutson, Roslyn L.
LeVernier, James A.
Littlefield, Daniel F., Jr.
Parins, James W.
Ramsey, C. Earl
Stodola, K. Zabelle
Vannatta, Dennis P.
Associate Professors:
Moore, E. Pat
Yoder, R. Paul
Instructor:
Munson, Alice A.

The Department of English offers instruction in literature, linguistics, and creative writing. The creative writing courses are intended for students who wish to develop sophisticated writing skills. The department’s linguistics courses offer instruction in the scientific study of language. The literature program includes such varied subjects as Arkansas writers, film, Shakespeare, and folklore. These courses are intended not only for English majors and minors but also for students preparing for careers in such fields as law, business, government, and medicine. Through rigorous assessment, the English department maintains current and relevant programs.

Major in English

A major in English literature for students pursuing the bachelor of arts degree consists of 33 hours in upper-level courses. All majors must include ENGL 3331 and 3332 Major British Writers I and II, either ENGL 3311 History of the English Language or ENGL 3312 Grammatical Analysis of Modern English, a choice of ENGL 3321, 3322, or 3323 American Literature I, II, or III, ENGL 3330 Perspectives on Literary Study, and 4199 Seminar in Career Perspectives. Up to six hours may be applied to the major from ENGL 4100, 4200, and 4390.

Minor in English

A minor in English requires 18 hours. These hours may include either ENGL 2337 or ENGL 2338; the remaining hours must be upper-level courses in English.

Creative Writing Emphasis

English majors who wish to emphasize creative writing must take the six courses required for the English major and the following upper-level courses:
ENGL 3318 Fiction Writing I or ENGL 3319 Poetry Writing I
ENGL 4369 The Form and Theory of Poetry or ENGL 3346 The Form and Theory of Fiction
ENGL 4398 Fiction Writing II or ENGL 4399 Poetry Writing II
One additional upper-level creative writing course (any of the above-listed writing courses, ENGL 3320 Screenwriting, or ENGL 4301 Advanced Creative Writing Project)
One upper-level course in twentieth century literature.
ENGL 2336 Introduction to Creative Writing is a prerequisite for upper-level creative writing courses.

Minor in Creative Writing

A minor in creative writing requires 18 hours selected from the creative writing course list.

Minor in Linguistics

A minor in linguistics requires 21 hours, including ENGL 3313, at least nine hours of linguistics courses chosen from ENGL 3311, 3312, 3314, and 4370 or 4100/4200 when the topic is in linguistics,\(^1\) up to six hours of foreign language\(^2\) elective courses, and up to nine hours of approved elective coursework chosen from ANTH 4316; AUSP 3360, 4366; PHIL 3330; PSYC 2310, 2341, 2440; and SOCI 2181, 2381.\(^3\)

Minor in Film

The English department participates in an interdisciplinary minor in film. Minors must take RTVF 2306 Introduction to Motion Pictures, and 15 hours of film courses in at least two disciplines. Interested students should consult the program administrator in the radio, TV, and film program in the School of Mass Communication.

Secondary Teacher Licensure

See “Secondary Teacher Licensure” on page 45 for details.

William G. Cooper, Jr., Honors Program in English

The William G. Cooper, Jr., Honors Program in English is sustained by an endowment created by the family of Dr. W.G. Cooper, Jr., in honor of his distinguished service on the Little Rock University Board of Trustees and UALR Board of Visitors.

The William G. Cooper, Jr., Honors Program in English is an option in the English major available to exceptional students. A student with a 3.25 overall GPA may apply for the program any time after completing 45 hours of course work. Students accepted in the honors program are invited also to apply for one of the stipends provided by the William G. Cooper, Jr., endowment. The honors option in English has 33 hours of course work, which includes the 16 hours required for all English majors: ENGL 3331 and 3332; 3311 or 3312; 3321, 3322, or 3323; 3330; and 4199. Additionally, they must take ENGL 4270 Honors Project, 4 hours from among ENGL 4150, 4250; 4160, 4260, and 11 hours of upper-level English electives. The honors courses comprise intensive learning projects, in-depth discussion, and closely directed research projects.

Students in the program must maintain a 3.25 GPA overall and a 3.5 GPA in their English courses to remain in good standing.

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1. Independent study and topics courses may be repeated one time if the topic changes but may not comprise more than six of the 21 minor hours.
2. Knowledge of a foreign language is strongly recommended for the linguistics minor.
3. Refer to the course description or check with the home department for any prerequisites to particular courses in this list.
Courses in Literature (ENGL)

ENGL 2335 Introduction to Literature
For the beginning student of literature. Topics vary and include selections from poetry, fiction, and drama. Three credit hours.

ENGL 2337 World Literature
Prerequisite: completion of the first year writing requirement. Study of selected texts reflecting various Western and non-Western literary heritages and traditions. Assigned works represent several national literatures, with at least one major text from each of four periods (antiquity, medieval, early modern, and the modern period) and from a minimum of three literary genres. Three credit hours.

ENGL 2338 World Literature Themes
Prerequisite: completion of the first year writing requirement. This class addresses the same competencies as ENGL 2337, but through exploration of a specific topic. Either 2337 or 2338 satisfies the core requirement, but they are distinctive courses and both may be taken for credit. Three credit hours.

ENGL 2339 Mythology
An introduction emphasizing Greek and Roman mythology and its influence on Western culture. Three credit hours.

ENGL 3321 American Literature I
Selected works from the earliest writings to American romanticism. Three credit hours.

ENGL 3322 American Literature II
Selected works from the period beginning with the romantic movement and ending with the Civil War. Three credit hours.

ENGL 3323 American Literature III
Selected works from the period beginning with the Civil War and ending in 1912. Three credit hours.

ENGL 3324 Arkansas Writers
A survey of Arkansas writers of the nineteenth and twentieth centuries. Three credit hours.

ENGL 3325 Literature of the South
Presentation of representative southern writers. Emphasis on writers of the southern renaissance of the twentieth century. Three credit hours.

ENGL 3326 African-American Literature I
African Americans in American culture from the colonial period to the twentieth century as expressed through the literary works of African-American writers. Three credit hours.

ENGL 3327 African-American Literature II
The writings of representative African American authors from 1900 to the present, with emphasis on the literature of Africa, the West Indies, and African-America. Three credit hours.

ENGL 3330 Approaches to Literature
Required for English majors. The course introduces the basics of literary research, critical methods, and critical writing. Though not a prerequisite for any other English course, students are strongly recommended to take this class early. Three credit hours.

ENGL 3331 Major British Writers I
Major writers of English literature to the mid-eighteenth century, including Chaucer, Shakespeare, and Milton. Three credit hours.

ENGL 3332 Major British Writers II
Major writers of English literature from the mid-eighteenth century to the present. Three credit hours.

ENGL 3340 Women in Literature
Literature by and about women, with emphasis on works by nineteenth- and twentieth-century writers. Three credit hours.

ENGL 3344 Modern Drama
A close analysis of selected British, American, and European plays. Three credit hours.

ENGL 3346 The Form and Theory of Fiction
Survey of the forms, techniques, and theories of fiction, emphasizing the views of fiction writers. Three credit hours.

ENGL 3360 Selected Topics in Literature
Special topics in literature, varying each semester. Topics cross geographic and temporal lines and usually deal with a specific genre or a theme. Three credit hours.

ENGL 3361 The Film as Literature
An introduction to the capabilities of film as literature, using many genres as illustration. Three credit hours.

ENGL 3370 Fundamentals of Folklore
The folklore process among Americans and other cultural groups. The dynamics of the folk event, the theory and applications of folklore, and practical field experience. Three credit hours.

ENGL 4100, 4200 Independent Study
Prerequisite: senior standing and 18 hours of English. Open to English majors only. For the student of superior ability who seeks special research in the field. One or two credit hours.

ENGL 4150, 4250 Honors Seminar
Prerequisite: consent of program director. Focused study of topics in language and literature. One or two credit hours.

ENGL 4160, 4260 Honors Tutorial
Prerequisite: consent of program director. Independent study of topics in literature and language. One or two credit hours.

ENGL 4199 Seminar in Career Perspectives
Required for majors. A capstone course for English majors for purposes of developing and assessing their career, educational, and personal goals. One credit hour.

ENGL 4202 Teaching Literature in Secondary Schools
A methods course team-taught by faculty from the Departments of English and Rhetoric and Writing. Topics to be addressed include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, approaches to teaching literature, and writing as a way to reading. To be taken in conjunction with RHET 4202. Dual-listed in the UALR Graduate Catalog as ENGL 5202. Two credit hours.

ENGL 4270 Honors Project
Prerequisite: consent of program director. Honor projects are typically scholarly or creative works. Program advisors and director must approve all projects. Two credit hours.

ENGL 4311 Medieval Literature
Representative works in English literature of A.D. 450 to 1500 as well as works in translation from medieval German, Latin, and romance literature. Three credit hours.

ENGL 4312 Chaucer
Selected works including Troilus and Criseyde and The Canterbury Tales. Three credit hours.

ENGL 4313 Arthurian Literature
A study of Arthurian chronicle and romance from Celtic beginnings through Malory, with examination of nineteenth- and twentieth-century developments of the legend. Three credit hours.

ENGL 4314 Topics in Medieval and Renaissance Literature
Selected topics in medieval and Renaissance literature. Three credit hours.

ENGL 4321 English Renaissance Drama
Major playwrights, including Marlowe, Kyd, Jonson, Beaumont, Fletcher, and Webster; excluding Shakespeare. Three credit hours.

ENGL 4324 Shakespeare
Selected works, including the major comedies and tragedies. Three credit hours.

ENGL 4325 Teaching Shakespeare Through Performance
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 UALR Graduate Catalog as ENGL 3325. Three credit hours.

ENGL 4328 Seventeenth-Century Literature
English poetry and prose from 1600 to 1660, with emphasis on Donne and Milton. Three credit hours.

ENGL 4331 Restoration and Early Eighteenth-Century Literature
Restoration drama; Dryden, Swift, early Pope. Three credit hours.

ENGL 4332 Mid and Late Eighteenth-Century Literature
Later Pope, the novel, Johnson. Three credit hours.

ENGL 4341 Romantic Poetry
Representative works of Blake, Coleridge, Wordsworth, Byron, Keats, and Shelley. Three credit hours.

ENGL 4343 Victorian Literature
Representative writers, including Tennyson, Browning, Arnold, and Hopkins. Three credit hours.

ENGL 4345 Topics in Nineteenth-Century Literature
Selected topics in British and American literature of the nineteenth century. Three credit hours.

ENGL 4351 British Novel I
Representative readings in the development of the British novel in the eighteenth and nineteenth centuries. Three credit hours.

ENGL 4352 British Novel II
Representative readings in the development of the British novel in the twentieth century. Three credit hours.

ENGL 4355 Readings in European Fiction
Representative readings in European fiction from the eighteenth century to the present. Three credit hours.

ENGL 4360 Topics in Modern Literature
Selected topics in modern literature. Three credit hours.

ENGL 4364 Modern Poetry
Representative readings in modern English and American poetry including works by Hopkins, Yeats, Frost, and Eliot. Three credit hours.
ENGL 4370 Seminar in Language or Literature
Prerequisites: senior standing and consent of instructor. Selected topics in language or literature. May be repeated when topic differs. Three credit hours.

Courses in Creative Writing (ENGL)

Creative writing courses (except ENGL 2336) may be repeated for credit with written permission from the chairperson of the Department of English.

ENGL 2336 Introduction to Creative Writing
Prerequisites: RHET 1311, 1312, or consent of instructor. Study and practice in the writing of fiction, poetry, and drama. Class discussion/workshop. Three credit hours.

ENGL 3318 Fiction Writing I
Prerequisite: ENGL 2336 or consent of instructor. Study and practice in the writing of fiction. Class discussion/workshop and individual conferences. Three credit hours.

ENGL 3319 Poetry Writing I
Prerequisite: ENGL 2336 or consent of instructor. Study and practice in the writing of poetry. Class discussion/workshop and individual conferences. Three credit hours.

ENGL 3320 Screenwriting
Prerequisite: ENGL 2336. Individual work in dramatic writing for film and television. Class discussion and individual conferences. Three credit hours.

ENGL 3346 The Form and Theory of Fiction
See literature course listing.

ENGL 3347 The Form and Theory of Poetry
See literature course listing.

ENGL 3348 Advanced Creative Writing Project
Prerequisites: three creative writing classes or consent of instructor. Independent study in the writing of fiction, poetry, or drama. Three credit hours.

ENGL 4116, 4216, 4316 Seminar in Creative Writing
Prerequisites: ENGL 3398, 3399, or consent of instructor. Continued study and practice in creative writing. Class discussion/studio workshop/field experience. May be repeated when the topic varies. Dual-listed in the UALR Graduate Catalog as ENGL 5116, 5216, 5316. One, two, or three credit hours.

Courses in Language and Linguistics (ENGL)

ENGL 2311 Vocabulary Building
Study of Greek and Latin origins and word families. Three credit hours.

ENGL 3311 History of the English Language
Development of the English language from the Old English period to the present. Three credit hours.

ENGL 3312 Grammatical Analysis of Modern English
Studies in the structure of modern English. Three credit hours.

ENGL 3313 Introduction to the Study of Language
An introductory linguistics course. Includes phonology, syntax, and semantics. Three credit hours.

ENGL 3314 Social and Regional Dialects
A study of English dialects and the dynamics of dialectic variation and use. Three credit hours.

ENGL 4100, 4200 Independent Study
Prerequisites: senior standing, 18 hours of English. Open to English majors only. For the student of superior ability who seeks special research in the field. One or two credit hours.

ENGL 4202 Teaching Literature in Secondary Schools
A methods course taught by faculty from the Departments of English and Rhetoric and Writing. Topics to be addressed include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, approaches to teaching literature, and writing as a way to reading. To be taken in conjunction with RHET 4202. Dual-listed in the UALR Graduate Catalog as ENGL 5520. Two credit hours.

ENGL 4325 Teaching Shakespeare Through Performance
Pedagogical focus on teaching Shakespeare’s plays in elementary and secondary schools by using performance activities. Special emphasis on Romeo and Juliet, Julius Caesar, Macbeth, and Hamlet. One comedy and one history play included by titles, may change each time the course is offered. Dual-listed in the UALR Graduate Catalog as ENGL 5325. Three credit hours.

ENGL 4370 Seminar in Language or Literature
Prerequisites: senior standing, consent of instructor. Selected topics in language or literature. May be repeated when topic differs. Dual-listed in the UALR Graduate Catalog as ENGL 5370. Three credit hours.
DEPARTMENT OF HISTORY

SH 601
569-3235
569-3059 (fax)
Chairperson:
Bolton, S. Charles, professor
Professors:
Anson, Edward M.
Baldwin, Deborah J.
Hanson, Gerald T.
Kaiser, Thomas E.
Lewis, Johanna Miller
Moneyhon, Carl H.
Vinikas, Vincent A.
Williams, C. Fred
Associate Professors:
Smolier, Laura A.
Williams, Leroy T.
Assistant Professors:
Bunch, Clea B.
Maguire, Moira
Mann, Kristin Dutch
Musgrove, Charles D.
Ross, Frances M.
Screws, Raymond D.

The arrangement and sequence of courses in the department have been organized to implement these objectives: to prepare undergraduate majors for advanced training in history, to train students to teach in the secondary schools, to provide instruction for the University’s core curriculum program, and to cooperate with the community at large on matters that pertain to the discipline. The history department is committed to the on-going process of assessing the effectiveness of our programs and courses.

Major in History
The history major must complete 30 credit hours of history, including HIST 2311, 2312, and at least 24 hours of upper-level history courses. The program must include at least six upper-level hours of United States history and at least six upper-level hours of non-United States history. Additionally, history majors with senior status (90 or more hours including UALR and transfer work) must take at least one three-hour capstone experience seminar prior to graduation. Depending on the subject matter of the seminar, the seminar can be counted as partial fulfillment of either the six-hour upper-level blocks or as an elective within the 24 upper-level required hours.

All students are advised to take HIST 1311 and 1312 before taking upper-level courses in European history and HIST 2311 and 2312 before taking upper-level courses in American history.

Students preparing to study history beyond the bachelor’s degree level are strongly advised to master at least one foreign language before graduation. Students preparing for advanced work should seek specific advising from a member of the department at their earliest opportunity.

Minor in History
A minor in history requires 18 hours, including HIST 2311, 2312, and 12 hours of upper-level history courses.

Secondary Teacher Licensure
See “Secondary Teacher Licensure” on page 45 for details. Students should see the History Department Chair for advising as soon as possible after acceptance to UALR.

History Honors Program
Thomas Kaiser, coordinator.

The department offers an honors program leading to the bachelor of arts in history with honors. To be admitted to the program, a student must be a declared major in history, have at least 60 hours of undergraduate college credit, including at least 15 hours of history, and have a cumulative grade point average of at least 3.25 on all university work taken at UALR and elsewhere.

To qualify for the degree with honors, a student must maintain a grade point average of at least 3.25 in all history courses, complete all requirements for the history major, and include six hours of history seminars in the 30 hours required for the history major. The seminars must be chosen with the advice of the honors coordinator or department chairperson.

Undergraduate seminars are normally dual-listed as graduate seminars. Undergraduate and graduate students participate in the same classroom activities, but specific course requirements differ. The seminar requirements of the honors program can be met through any combination of:

- HIST 4391 Seminar in United States History. May be repeated one time for credit if the topic changes.
- HIST 4393 Seminar in World History. May be repeated one time for credit if the topic changes.
- HIST 4396 Seminar in Arkansas History.
- HIST 4399 Independent Study, when the content by prior arrangement includes a seminar component. This may be accomplished by the participation of undergraduates in classroom activities of a graduate seminar course. In such instances, the seminar instructor, the student, and the honors coordinator must agree in writing before enrollment on assignments, testing or reports, and grading standards appropriate to an undergraduate honors student.

In addition, each semester one section of History of Civilization (HIST 1311 and 1312) is designated as an honors section. Although open to all qualified students and not a requirement for the honors degree, students interested in the honors program are encouraged to participate in this section.

More information can be obtained from the honors coordinator.

Courses in History (HIST)

HIST 1311 History of Civilization I
Recommended prerequisite: RHET 1311. The history of the world’s significant civilizations from their beginnings to approximately AD 1600: the development of integrated political, social, economic, religious, intellectual, and artistic traditions and institutions within each of those cultures; significant intercultural exchanges. Three credit hours.

HIST 1312 History of Civilization II
Recommended prerequisite: RHET 1311. The history of the world’s significant civilizations since approximately AD 1600: examination of the persistence of traditional civilizations and the changes in the world order due to the development of modern industrial society, modern science, and the nation state. Three credit hours.

HIST 2311 U.S. History to 1877
Description, analysis, and explanation of the major political, social, economic and diplomatic events through "Reconstruction." Special attention is devoted to the cross-cultural development of three civilizations, Native American, European, and African, within the geographical context of the North American continent. Major topics for study include European colonial empires; the American Revolution; the Constitution of 1787; evolution of a national government, federal in system and republican in form; social and economic theories and practices; relationship with foreign governments; and the American Civil War. Three credit hours.

HIST 2312 U.S. History since 1877
Description, analysis, and explanation of the political, social, economic and diplomatic events to the present time. Special attention is devoted to the forces of Modernity and the impact of cultural pluralism on traditional institutions. Major topics for study include industrialization; agrarianism; labor; immigration; reform movements; total and limited war; economic theory and practice; and the U.S.’s role in world affairs. Three credit hours.
HIST 3301 Ancient History and Thought
Social, intellectual, and cultural history of ancient Mesopotamian, Egyptian, Greek, and Roman peoples. Three credit hours.

HIST 3302 History of Ancient Greece
A political, constitutional, and social history of Greece from the Homeric Age to the fall of the Athenian Empire in 404 BC. Three credit hours.

HIST 3303 The Hellenistic Age
The study of Greek civilization from the fall of the Athenian Empire (404 BC) through the reign of Alexander the Great to the collapse of his successors’ kingdoms before the advent of Rome (c. 146 BC). Three credit hours.

HIST 3304 History of the Roman Republic
The history of the expansion of the city of Rome from a small village on the banks of the Tiber to a world empire. Three credit hours.

HIST 3305 The History of the Roman Empire
A history of the Roman Empire from the reign of Augustus and the rise of Christianity to the end of antiquity. Three credit hours.

HIST 3312 History of Medieval Civilization
A study of the interaction of the social class structure and Christianity in forming the institutions of medieval civilization (c. AD 1000-1350). Three credit hours.

HIST 3313 The Renaissance, 1300-1550
A study of urban and court life at the time of the Renaissance. Examines such themes as humanism, the arts, discovery, and gender issues in Italy and northern Europe. Three credit hours.

HIST 3315 Early Modern Europe, 1600-1815
Survey of major developments from the Thirty Years’ War through the French Revolution. Examines the role of international conflict, national state building, commercialization, the scientific revolution, and the enlightenment in the period of the early modernization and disintegration of the Old Regime. Three credit hours.

HIST 3316 Europe in the Age of Revolution, 1789–1914
Survey of European history from the French Revolution to the outbreak of the First World War. Emphasis on revolutionary movements, nationalism, industrialization, class society, and imperialism. Three credit hours.

HIST 3317 Twentieth-Century Europe
World War I and its consequences; depression; totalitarianism; World War II, the reconstruction of Europe; the Cold War. Three credit hours.

HIST 3321 History of Britain to 1688
The period from the earliest times to the Glorious Revolution. Three credit hours.

HIST 3322 History of Britain since 1688
The period from the Glorious Revolution to the present. Three credit hours.

HIST 3323 British Empire
The political, social, and economic development of the British Empire, the foundations of the Commonwealth, and the emergence of the dominions and the dependent empire as autonomous units with the Commonwealth. Three credit hours.

HIST 3325 History of Russia to 1917
History of Russia from prehistoric origins through Kievan, Muscovite, and Tsarist periods with consideration of political, intellectual, economic, and religious factors. Emphasis on Tsarist policies. Three credit hours.

HIST 3326 The Soviet Union and Russia since 1917
Survey of major social, political, and cultural developments including the Russian Revolution, Stalinism, the Cold War, everyday life, the collapse of the Soviet Union, and the post-Soviet era. Three credit hours.

HIST 3328 Modern France
The French political community from the Old Regime to the Fifth Republic, with emphasis on the interrelationship of politics, class, and culture. Three credit hours.

HIST 3330 Early Modern Germany 1495–1806
Survey of the major social, political, and cultural developments in Germany from the Reformation to the French Revolution. Topics include political fragmentation and intra-German conflict, religious conflict, absolutism, the Enlightenment, the collapse of the Holy Roman Empire as well as everyday life, art, and literature. Three credit hours.

HIST 3331 Modern Germany since 1806
German history from the French Revolution to Re-Unification. Topics include nationalism and unification, revolutionary movements, industrialization and class society, Nazism and the Holocaust, post-war division, democratization and Europeanization, reunification, and the shifting nature of German identity. Three credit hours.

HIST 3336 Islam and the Modern Middle East
An examination of the role of Islam as the primary cohesive element in the social, political, and cultural development of the modern Middle East. Comparison and contrast of Western and Middle-Eastern perspectives on relevant current issues. Same as RELS 3336. Three credit hours.

HIST 3341 East Asia Foundations: Culture & History to 1600
Development of the political, economic, social, and intellectual patterns within the East Asian cultural sphere from prehistory to the sixteenth century, with an emphasis on China and Japan. Three credit hours.

HIST 3342 History of Modern China
Reaction to contacts with Western civilization; continuity, modernization, and revolution from the nineteenth century to the present. Three credit hours.

HIST 3345 People’s Republic of China
The history of the origins of the Chinese Communist Party and of the development of China under Communist rule. Three credit hours.

HIST 3347 History of Japan
Development of the political, social, economic, and intellectual patterns of Japanese life from prehistory to the present. Three credit hours.

HIST 3351 Colonial America, 1607-1763
English settlements in the New World, the development of colonial society, American colonies, the British Empire. Three credit hours.

HIST 3352 American Revolution, 1763-1787
Colonial society in 1763, British imperial policy and the American response, the war for independence, effects of the Revolution on American ideas and institutions. Three credit hours.

HIST 3353 The New Republic: The US, 1787–1848
The formation of the Constitution, the emergence of American political institutions, economic and social development, and nationalism. Three credit hours.

HIST 3355 American Civil War and Reconstruction, 1848–1876
The origins of the American Civil War, its course, and subsequent efforts at reconciling North and South. Emphasis on the social, economic, and cultural background to the war and its impact on American society. Three credit hours.

HIST 3356 The Gilded Age: The US, 1876-1900
United States history from the end of Reconstruction through the presidential administration of William McKinley. The course emphasizes the changing character of American society in this era, including the farmers’ revolt, industrialization, foreign affairs, and major social trends. Three credit hours.

HIST 3357 The Age of Reform: The US, 1900-1939
The political, economic, social, and diplomatic development of the United States between 1900 and 1939. Three credit hours.

HIST 3358 Recent America: The US, 1939-present
A history of the American people in recent times, including economic, social, and cultural developments as well as political, diplomatic, and military events. Three credit hours.

HIST 3371 History of Latin America: Colonial Period
Indian culture, Colonial European discovery, conquest, and colonial development; the Spanish colonial regime in the New World from 1492 to 1820; and wars of independence. Three credit hours.

HIST 3372 History of Latin America: Republican Period
Formation of the Latin American countries stressing political, economic, social, and cultural factors as well as the role of Latin America in world affairs. Three credit hours.

HIST 3375 Modern Mexican History
A study of political, social, and economic developments in Mexico since 1870. Industrialization, nationalism, foreign intervention, and multinational corporations as they relate to Mexican development and the 1910 Mexican Revolution. Three credit hours.

HIST 3380 The Indian in American History
A survey of red-white relations from first contacts through the creation of a reservation system in the 1800s and the removal of the Indians. Three credit hours.

HIST 4301 History of Technology
A survey of the role of technology from the Stone Age to the nuclear age. Three credit hours.

HIST 4302 Magic, Science, and the Occult from Antiquity to Newton
A survey of humans’ 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. Dual-listed in the UALR Graduate Catalog as HIST 5302. Three credit hours.

HIST 4304 Alexander the Great
The 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. Dual-listed in the UALR Graduate Catalog as HIST 5304. Three credit hours.

HIST 4305 Environmental History
Study of humanity’s interrelationship with the natural environment throughout history, with emphasis on historical factors relating to current environmental problems. Three credit hours.

HIST 4306 History with Objects
Prerequisite: HIST 2311, 2312 or consent of instructor based on individual student need and ability. 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. Dual-listed in the UALR Graduate Catalog as HIST 5306. Three credit hours.
HIST 4312 Medicine, Miracles, and Magic: Early History of Healing in Medieval and Renaissance Europe
A holistic examination of various ways in which Europeans sought to cure disease in preindustrial times. 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. Dual-listed in the UALR Graduate Catalog as HIST 5312. Three credit hours.

HIST 4313 Apocalypse Now and Then: A History of Apocalyptic Thought and Movements
This course offers a history of beliefs about the end of the world in the western Judeo-Christian tradition. Through lectures and readings, we will examine such topics as the birth of apocalyptic thought, the medieval development of various aspects of traditions about the End (such as the figure of Antichrist and millennial traditions), 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 the flexibility of apocalyptic language, its ability to interpret various historical situations, and its power to move people to acceptance or action. Dual-listed in the UALR Graduate Catalog as HIST 5313. Three credit hours.

HIST 4314 A History of Millennial Visions in Film and Literature
Examines past moments in which people take stock of the present by gazing into the future. Through literature and film, studies predictions of the future in their historical contexts. Looks at positive and negative views of the future, secular and religious predictions for humans’ fate. Dual-listed in UALR Graduate Catalog as HIST 5314. Three credit hours.

HIST 4315 Religious History of the United States
Development of Protestantism including evangelicalism, new denominations, and fundamentalism; incorporation of Catholicism and Judaism into main stream; the 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. Dual-listed in the UALR Graduate Catalog as HIST 5315. Three credit hours.

HIST 4316 Ideology and Revolution in Eighteenth-Century Europe
The late eighteenth-century age of revolution and its background. The crisis of the Old Regime; the contributions of Jansenism, the Enlightenment, constitutionalism, and the politics of gender to the formation of a revolutionary ideology; the course of revolution during the last decade of the eighteenth century. Emphasis on France, but some attention to Britain, Germany, Italy, and America. Three credit hours.

HIST 4318 Modern Revolutions: From France to China
A comparative examination of five modern revolutions: the French Revolution (1789-1815), the Meiji “Restoration” in Japan (1853-1890), the Mexican Revolution (1910-1920), the Russian Revolution (1917-1932), and the Chinese Revolution (1919-1949). We will consider such issues as the extent of real turnover in the state apparatus, the prevalence of state-driven “revolutions from above” as opposed to classic “revolutions from below” in modern history, the balance of internal and external causation, and the nature of revolutionary violence. Dual-listed in the UALR Graduate Catalog as HIST 5318. Three credit hours.

HIST 4319 Military History of the Western World
A survey of military developments from the time of the Greeks until the end of World War II. The course investigates how internal institutions, international goals, diplomatic considerations, leadership, and the application of technology by nations have affected the evolution of warfare in the West. These factors are examined to help students understand the nature of Western military systems and how they have been used as instruments of national policy. Three credit hours.

HIST 4333 European Social and Cultural History
Interdisciplinary surveys of major European social and cultural developments from the Enlightenment to the present. Explores the interrelationship between a changing society and its beliefs; examines the political impact of modern ideologies, the sciences, and the arts. Three credit hours.

HIST 4338 Holocaust
The Holocaust as both a German and international event. Major topics include the tradition of anti-Semitism, the politics of immigration, the planning and execution of the Final Solution, Jewish and non-Jewish resistance, the complicity of non-Germans, the role of the Allied powers, and the settling of accounts at the Nuremberg trials. Three credit hours.

HIST 4345 Chinese Film and History
This course looks at the traumatic twentieth century through the lenses of Chinese filmmakers, particularly focusing on how a century of revolution affected urban and rural areas, the roles of women, and the daily lives of people in general. Dual-listed in UALR Graduate Catalog as HIST 5345. Three credit hours.

HIST 4352 The American West: Trans-Mississippi
A study of the westward expansion of the United States; United States penetration into the Trans-Mississippi River West after the Lewis and Clark expedition; social, political, and economic development; culture of the indigenous Indians of the northern and southern plains. Three credit hours.

HIST 4353 The Old South
The development of southern institutions and ideas from the colonial period through the Civil War. Three credit hours.

HIST 4354 The New South
Continuity and change within the southern states from Reconstruction to the present. Three credit hours.

HIST 4355 History of Arkansas
Physiographic and demographic patterns; exploration, settlement, and political, social, and economic evolution of Arkansas from the Spanish and French encroachments to the present. A study of contemporary policies and government in Arkansas. Three credit hours.

HIST 4359 American Urban History
Beginnings and growth of urbanization in America from colonial times to the present. Emphasis on the economic base of urban expansion; development of urban policies, services, and municipal administration; the image of the city in popular thought; the impact of industrialization, transportation, population, and the frontier on urbanization. Three credit hours.

HIST 4363 Law in American History
The development of legal institutions in America from their English origins to the present. The role of law, legal thought and the legal profession, the independent judiciary, civil rights, and the law’s role in economic development. Three credit hours.

HIST 4364 History of American Enterprise
The development of business enterprise in America from its roots in English colonialism through the advent of industrialism; the growth of commerce, the governmental foundations of the national marketplace, and the dawn of the corporate age; the relationship between property and the state, social values and the profit motive, innovation and economic advance. Three credit hours.

HIST 4365 Modern U.S. Culture
An examination of the historical development of mass culture in modern America. Concentration on the historical dimensions of culture and the ways in which Americans have redefined their values in response to technological and social change. It will explore the impact of various mechanisms through which a mass culture emerged, including movies, magazines, radio, television. Considers the relationship between culture and national character as currently debated by leading historians. Three credit hours.

HIST 4367 American Labor History
A study of American labor history from colonial times to the present; indentured servitude, slavery, sea-going and free labor, the impact of immigration and the introduction of the factory system, patterns of organization, mass production industries, automation, and the emergence of subsequent problems of the modern labor movement. Three credit hours.

HIST 4368 Black History to 1865
Lectures, selected readings, and discussion on phases of black development in America.

HIST 4369 Black History Since 1865
A comprehensive study of the socioeconomic, cultural, and political development of African-Americans from the end of the Civil War to the present. Three credit hours.

HIST 4371 Women in World History
An examination of the conditions of women in history with emphasis on problems in European history; attitudes toward women as reflected in religious, legal, and philosophical literature; and the role expectations of women in various societies. Three credit hours.

HIST 4372 Perspectives on Women in American History
Consideration of conditions and problems of women in American history from colonial to modern times with reference to European background and parallels when appropriate. Three credit hours.

HIST 4373 History of Family and Childhood in Modern Europe
The course introduces students to the history of childhood and family life in nineteenth and twentieth century Europe. Three credit hours.

HIST 4378 The History of U.S.-Latin American Relations
Survey of U.S.-Latin American relations from the pre-Columbian period to the present with emphasis on the nineteenth and early twentieth centuries. Focus on the diplomatic and economic relationships, including dollar diplomacy, intervention, dictatorship, and revolution. Three credit hours.

HIST 4385 U.S. Diplomatic History
The origins, character, and consequences of United States foreign policy and its transformations through the nineteenth century, World War I, World War II, the Cold War, and the modern world. Three credit hours.

HIST 4390 Special Topics in History
Specialized study of selected topics in history. Course content changes each semester; refer to the semester class directory. Three credit hours.

HIST 4391 Seminar in United States History
Prerequisites: HIST 2311, 2312, six hours of upper-level United States history. Advanced study of a topic in United States history chosen by instructor; includes a major research and writing project incorporating the department’s goals of identifying problems, evaluating sources, synthesizing evidence; and writing in an appropriate scholarly format. Three credit hours.
Minor in Geography

Gerald H. Hanson, coordinator.

A geography minor consists of 18 hours, including two courses chosen from GEOG 1310 World Economic Geography, 1311 Introduction to Physical Geography, or 2312 Cultural Geography, plus 12 additional hours of geography courses. For more information, contact the coordinator at (501) 569-8730.

The following courses in geography may be used to complete the geography minor, to meet core curriculum requirements, and to meet part of the bachelor of arts in liberal arts program requirements.

Courses in Geography (GEOG)

GEOG 1310 World Economic Geography
An introductory survey of economic activities. Basic concepts of economic activity location are studied. A survey of economic geography of countries outside North America, with emphasis on the distribution of resources in these countries. Three credit hours.

GEOG 1311 Introduction to Physical Geography
Study of earth-sun relationships that produce the elements of weather, including temperature, climate, soil, and vegetation patterns, and air circulation. Patterns of climate and their interrelationship with soil and vegetation systems. Study of major landform processes, which shape the earth's surface, with specific reference to North America. Three credit hours.

GEOG 2310 World Regions
World regional patterns of population, natural resources, and economic activities with reference to the nature of regions and their characteristics. Regional patterns of Europe, North America, Latin America, Africa, and East and South Asia. Three credit hours.

GEOG 2312 Cultural Geography
Recommended: RHET 1313. The nature, distribution, and development of various cultural systems as they interact with each other and with their environment. A study is made of spatial patterns in the elements of culture, including population, religion, language, political ideology, economic activities, and settlement. Examination of the processes that have changed the natural landscape to a cultural landscape. Three credit hours.

GEOG 3305 Environmental Conservation
Survey of the human environment with respect to a wise management of natural resources. Examination of major resources and their use with reference to North America and to Arkansas. Recommended to early childhood education majors. Three credit hours.

GEOG 3315 Geography of Arkansas
Study of Arkansas' natural and cultural environments with emphasis on how various groups, past and present, interact with the state's natural regions. Geologic, climate, soil, and vegetation patterns are examined. Settlement patterns; economic activities, including agriculture, forestry, mining, and industry; and population distributions are analyzed and placed together with the state's natural regions. Three credit hours.

GEOG 3320 Urban Geography
Study of the urban landscape and the specific land uses found in United States cities. Current geographic pattern of industrial, commercial, residential, public, and recreational activities in our cities with reference to Arkansas. Three credit hours.

GEOG 4321 Geomorphology
See JESC 4321. Dual-listed in the UALR Graduate Catalog as GEOG 5321. Three credit hours.

GEOG 4300 Special Topics
Prerequisites: consent of instructor, nine hours of geography or an associated discipline that complements the seminar topic. Topics will be chosen on the basis of contemporary interest and demand and will be focused to provide an in-depth understanding of the issue. Dual-listed in the UALR Graduate Catalog as GEOG 5300. Three credit hours.

GEOG 4332 Population Geography
Focus on global, national, and sub-national population processes, issues, and policies. Emphasis places on the basic demographic components of fertility, mortality, and migration; on population structures; and on the factors which influence the demographic components and the population structures over time. Policy implications of the population processes and changes explored. Issued addressed from a spatial perspective. Dual-listed in the UALR Graduate Catalog as GEOG 5332. Three credit hours.

GEOG 4290, 4390 Independent Study
Prerequisites: 15 hours of geography including GEOG 1311, 2312, and consent of instructor. Research and reading in various areas of geography. Projects reflect student interest and career objectives along with departmental emphasis. Two or three credit hours.

GEOG 4397 Social Studies Teaching Applications
Social studies content linked with practical applications for classroom instruction. Content from history, geography, political science, sociology/anthropology, and psychology. Content modeled for prospective secondary education teachers to illustrate how course content can be applied in the classroom. Critical components of each of the disciplines integrated into the content presentations and the demonstrated applications. Team taught. Three credit hours.
DEPARTMENT OF INTERNATIONAL & SECOND LANGUAGE STUDIES

The Department of International and Second Language Studies (DISLS) comprises academic programs in foreign languages, international studies, academic and non-academic classes in English as a Second Language, programs abroad, foreign language and ESL education, and the outreach programs of the Arkansas International Center. Majors offered in the DISLS include French, German studies, international studies, and Spanish. Minors included French, German, international studies, and Spanish.

Courses in foreign languages are offered to give the student proficiency in basic language skills, such as speaking, writing, reading, and understanding; to guide advanced students to fluency of the written and spoken idioms; to acquaint students with major literary works in foreign languages and increase awareness and appreciation of other cultures; to provide courses necessary and useful for those preparing to teach a foreign language or communicate in international affairs; to promote intercultural communication; and to offer background preparation necessary for graduate work in a foreign language. In order to insure that this occurs, the skills of listening, speaking, reading, writing, and cultural understanding are assessed throughout the programs and upon completion of the major.

Second Language Requirement for BA, BSE, and BSW Students

See “Second Language Requirement” on page 27.

ESL Endorsement for Teachers

The DISLS offers the four-course endorsement in English as a Second Language (ESL) as per the requirements of the State of Arkansas. The endorsement is added to current teacher licensure. K-12. Students seeking the endorsement must take LANG 4322 Teaching Second Languages, LANG 4323 Second Language Acquisition, LANG 4324 Teaching People of Other Cultures, and LANG 4325 Second Language Assessment.

English as a Second Language (ESL)

Credit and non-credit courses in ESL are offered during the fall, spring, and summer sessions. Intensive English classes focus on preparation for university study. Placement testing for the three-level intensive English program is held at the beginning of each semester. Testing is also available for international students who require language clearance before registering for UALR classes.

Major in French

A Major in French for students pursuing the bachelor of arts degree consists of 30 hours above the 1000 level as specified below, of which 9 hours must be at the 4000 level. A grade of C or greater is required in all courses specified for the major. French majors are strongly encouraged to enroll in LANG 4322 Teaching Second Languages. This course does not count as part of the 30 hours in French; it offers enrichment to the degree program.

B.A. in French

FREN 2311 Intermediate French I

Communications (12-15 hours)

FREN 3310 Integrated Skills I
FREN 3311 Integrated Skills II
FREN 3312 Integrated Skills III
FREN 2315 Intermediate Conversational French or FREN 3115, 3116, 3117 Advanced Conversation

Cultures (3-9 hours)

FREN 3334 French Culture and Civilization I
FREN 3335 French Culture and Civilization II
FREN 3336 Francophone Cultures

Comparisons and Communities (3-9 hours)

FREN 3316 French Pronunciation
FREN 4316 Advanced Listening and Pronunciation
FREN 4141, 4142, 4143 French Practicum
FREN 4350 Senior Project
LANG 3390 Study Abroad

Connections (3-9 hours)

FREN 3333 Selected Readings in French Literature
FREN 4331 Writings: Historical Perspective
FREN 4341 Writings: Modern Perspective
FREN 4351 French Cinema
FREN 4361, 4262 Seminar in French Literature

Minor in French

A minor in French consists of 21 hours above the 1000 level. Fifteen hours must be in upper-level courses, with at least three hours at the 4000 level as specified.
below. A grade of C or greater is required in all courses specified for the minor. French minors are strongly encouraged to enroll in LANG 4322 Teaching Second Languages This course does not count as part of the 21 hours in French.

**Minor in French**

FREN 2311 Intermediate French I

Communications (9 hours)
FREN 3310 Integrated Skills I
FREN 3311 Integrated Skills II
FREN 3312 Integrated Skills III

3 hours from the following
FREN 2315 Intermediate Conversational French
FREN 3115, 3116, 3117 Advanced Conversation

Cultures (3 hours)
FREN 3334 French Culture and Civilization I
FREN 3335 French Culture and Civilization II
FREN 3336 Francophone Cultures

Comparisons and Communities (3 hours)
FREN 3316 French Pronunciation
FREN 4316 Advanced Listening and Pronunciation
FREN 4141, 4142, 4143 French Practicum
FREN 4350 Senior Project
LANG 3390 Study Abroad

Connections (3 hours)
FREN 3333 Selected Readings in French Literature
FREN 4331 Writings: Historical Perspective
FREN 4341 Writings: Modern Perspective
FREN 4351 French Cinema
FREN 4361, 4262 Seminar in French Literature

**Honors Program in French**

The department offers an honors program available to exceptional students leading to the bachelor of arts in French with honors. To be admitted to the program, a student must apply for acceptance to the program, be a declared major in French, have at least 60 hours of undergraduate college credit, including at least 15 hours of French, and have a cumulative grade point average of at least 3.25 on all University work taken at UALR and elsewhere.

To qualify for the degree with honors, a student must maintain a cumulative grade point average of at least 3.25 and a 3.25 in all French courses, complete all requirements for the French major, and include a three hour specialized French seminar and a three hour Senior project in the 30 hours required for the French major. Study abroad is strongly encouraged. More information can be obtained from the department advisor.

**Major in German Studies**

A major in German Studies for students pursuing the bachelor of arts degree consists of 30 hours above the 1000 level, including GERM 3334, 4151, 4152, 4153, a 4000-level German literature seminar, 15 hours of German language instruction, and 6 approved elective hours in a related discipline. Options for elective courses must be approved by the German Studies Committee and have a German Studies focus such as art history, history, philosophy, politics, etc. A grade of C or greater is required in all courses specified for this major. German Studies majors are encouraged to participate in a study abroad program to deepen their understanding of German-speaking cultures. There are no special program admission requirements.

**Minor in German**

A minor in German consists of 21 hours above the 1000 level. Fifteen hours must be in upper-level courses, with at least three hours at the 4000 level. A minor must complete GERM 3311 and 3312 or demonstrate equivalent proficiency. A grade of C or greater is required in all courses specified for the minor. German minors are strongly encouraged to enroll in LANG 4322 Teaching Second Languages. This course does not count as part of the 21 hours in Spanish.

**Major in Spanish**

A major in Spanish for students pursuing the bachelor of arts degree consists of 30 hours above the 1000 level. Twenty-four hours must be in upper-level courses, with at least six hours at the 4000-level. A major must complete SPAN 3311 and 3312 or demonstrate equivalent proficiency. A grade of C or greater is required in all courses specified for the major. Spanish majors are strongly encouraged to enroll in LANG 4322 Teaching Second Languages. This course does not count as part of the 21 hours in Spanish.

**Minor in Spanish**

A minor in Spanish consists of 21 hours above the 1000 level. Fifteen hours must be in upper-level courses, with at least three hours at the 4000 level. A minor must complete SPAN 3311 and 3312 or demonstrate equivalent proficiency. A grade of C or greater is required in all courses specified for the minor. Spanish minors are strongly encouraged to enroll in LANG 4322 Teaching Second Languages. This course does not count as part of the 21 hours in Spanish.

**Instruction in Other Languages**

Courses in other modern languages (Italian, Japanese, Portuguese, Russian, etc.) and classical languages (Greek, Hebrew, Latin, etc.) are offered periodically in response to student interest.

**Courses in General Foreign Languages (LANG)**

**LANG 0321 English as a Foreign Language**
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

**LANG 0322 English as a Foreign Language**
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

**LANG 0323 English as a Foreign Language**
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

**LANG 0324 English as a Foreign Language**
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

**LANG 1111 Elementary Language Laboratory I**
Corequisite: LANG 1311. Offered in a designated foreign language. Supervised laboratory practice in listening, speaking, and aural comprehension. One credit hour.

**LANG 1112 Elementary Language Laboratory II**
Corequisite: LANG 3132. Continuation of LANG 1111. One credit hour.

**LANG 1210 Language for Travel and Business**
Conversational skills in a designated foreign language for individuals interested in language primarily for travel and business. Will not substitute for any 1311, 1312, or 1315 language course. Two credit hours.

**LANG 1212 Language for Travel and Business II**
Continuation of LANG 1210. Will not substitute for any 1311, 1312, or 1315 language course. Two credit hours.

**LANG 1311 Elementary Language I**
Offered in a designated foreign language in response to student interest. A course for beginners with no knowledge of the specified language. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic grammar and a limited reading ability. Three credit hours.

**LANG 1312 Elementary Language II**
Prerequisite: LANG 1311 in specified language or equivalent. Continuation of LANG 1311. Three credit hours.

**LANG 1321, 1322 English as a Foreign Language**
An elementary course for nonnative speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic grammar and a limited reading ability. Three credit hours.

**LANG 1323, 1324 English as a Foreign Language**
Prerequisites: LANG 1321, 1322, or equivalent proficiency. Continuation of LANG 1321, 1322. Three credit hours.
LANG 1325, 1326 English as a Foreign Language
Prerequisite: LANG 1325, 1326, or equivalent proficiency. Continuation of LANG 1325, 1326. Three credit hours.

LANG 1327, 1328 English as a Foreign Language
Prerequisite: LANG 1327, 1328, or equivalent proficiency. Continuation of LANG 1325, 1326. Three credit hours.

LANG 1390, 1391, 2390, 2391, 3390, 3391, 3690, 3691, 3692, 3693 Language Study Abroad
Prerequisite: study of language of region visited. Offered for study abroad only. A language skills acquisition course often including a study of the culture and civilization of the region visited. Level of credit determined by student's placement abroad in a University-sanctioned program. Hours of credit determined prior to departure and based upon program content and duration. These courses do not satisfy the UALR second language proficiency requirement.

LANG 2302 Foreign Language for Music Students
Study and practice of pronunciation of Italian, French, and German for music students; selections from opera, folk music, and standard vocal repertoire. Cannot be used to fulfill requirements in the department. Three credit hours.

LANG 2311 Intermediate Language I
Prerequisite: LANG 1312 in specified language or equivalent. A continuation of LANG 1312, the intermediate course leads to greater facility in the spoken language and to more advanced reading skills. Three credit hours.

LANG 2312 Intermediate Language II
Prerequisite: LANG 2311 in specified language or equivalent. Continuation of LANG 2311. Three credit hours.

LANG 2350 Foreign Language Study Trip
Prerequisite: appropriate LANG 1312 or consent of department chairperson. Offered with study abroad programs only. In addition to practical experience in language usage, students will undertake various projects requiring language use. Three credit hours. This course does not satisfy the UALR second language proficiency requirement.

Courses in Classical Languages (CLNG)

CLNG 1301 Elementary Classical Language I
Offered in a designated classical language in response to student interest. Introduction to the grammar of a designated classical language. Elementary reading and translation in selected texts. Three credit hours.

CLNG 1302 Elementary Classical Language II
Prerequisite: CLNG 1301 in specified classical language or equivalent. Continuation of Classical Language 1301. Three credit hours.

CLNG 1311 Elementary Biblical Hebrew
Introduction to the grammar of biblical Hebrew. Elementary reading in selected biblical texts. Three credit hours.

CLNG 1312 Biblical Hebrew Reading
Prerequisite: CLNG 1311 or consent of instructor. Reading of selected biblical prose texts, leading toward development of rapid reading ability. Three credit hours.

Courses in French (FREN)

FREN 1311 Elementary French I
A course for beginners with no knowledge of French. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic grammar and a limited reading ability. Three credit hours.

FREN 1312 Elementary French II
Prerequisite: FREN 1311 or equivalent. Continuation of FREN 1311. Three credit hours.

FREN 1315 Conversational French
Prerequisite: FREN 1312 or consent of instructor. A performance course with emphasis on everyday conversation and discussion. For students with a basic knowledge of French grammar. Three credit hours.

FREN 2311 Intermediate French
Prerequisite: FREN 1312 or equivalent. The intermediate course leads to greater facility in the spoken language and to more advanced reading skills. Three credit hours.

FREN 2315 Intermediate Conversational French
Prerequisite: FREN 2311. A performance course with emphasis on intermediate-level conversation and discussion. Three credit hours.

FREN 3115, 3116, 3117 Advanced Conversation
Special topics for discussion at an advanced level. Leads to expanded vocabulary mastery and greater fluency in the spoken idiom. May be taken one, two, or three hours per semester to a maximum of six hours.

FREN 3310 Integrated Skills I
Prerequisite: FREN 2311 or equivalent proficiency. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the presentational mode. Three credit hours.

FREN 3311 Integrated Skills II
Prerequisite: FREN 2311 or equivalent proficiency. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpersonal mode. Three credit hours.

FREN 3321 Teaching Second Languages
An overview of methods and materials used to teach skill development in modern second languages, techniques considered most effective, and appropriate assessment strategies. Required for foreign language teacher certification and the ESL endorsement in the state of Arkansas. Dual-listed in the UALR Graduate Catalog as LANG 3322. Three credit hours.

FREN 3322 Second Language Acquisition
Prerequisite: junior standing. How second language is acquired by children and adults. A course for those preparing to teach students with limited English proficiency. Required for ESL endorsement in the state of Arkansas. Dual-listed in the UALR Graduate Catalog as LANG 3322. Three credit hours.

FREN 3324 Teaching People of Other Cultures
Prerequisite: junior standing. Cultural issues for teaching students with limited English proficiency. A required course for ESL endorsement in the state of Arkansas. Dual-listed in the UALR Graduate Catalog as LANG 3324. Three credit hours.

FREN 3325 Second Language Assessment
Prerequisite: junior standing. Examine 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. Dual-listed in the UALR Graduate Catalog as LANG 3325. Three credit hours.

FREN 3350 Advanced Foreign Language Study Trip
Prerequisite: appropriate language at the junior level or consent of department chairperson (given for equivalent knowledge). Offered with study abroad programs only. In addition to gaining practical experience in language usage, students will choose and undertake a research project of their choice, requiring fluency. Three credit hours. This course does not satisfy the UALR second language proficiency requirement.

CLNG 2301 Intermediate Classical Language I
Prerequisite: CLNG 1302 or equivalent. Readings from the works of classical authors providing an introduction to the literature of the ancient world. Three credit hours.

CLNG 2302 Intermediate Classical Language II
Prerequisite: CLNG 2301 or equivalent. Readings from the works of classical authors to prepare students for studies of prose and poetry written during the flowering of ancient civilizations. Three credit hours.

CLNG 3311 Advanced Biblical Hebrew
Prerequisite: CLNG 1312. Selected readings of poetic texts in the Hebrew Bible. Investigation of poetic syntax and meter. Three credit hours.

FREN 3312 Integrated Skills III
Prerequisite: FREN 2311 or equivalent proficiency. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpretive mode. Three credit hours.

FREN 3316 French Pronunciation
Prerequisite: FREN 2311 or consent of instructor. The sounds and phonetic symbols of the French language with reference to phrasing, stress, rhythm, and intonation. Three credit hours.

FREN 3321 French Short Stories
Prerequisite: FREN 2312 or consent of instructor. Reading and criticism of short stories by outstanding authors. Three credit hours.

FREN 3322 Introduction to French Literature
Prerequisite: FREN 2311. History of the literature from the end of the seventeenth century to the present. Three credit hours.

FREN 3333 Selected Readings in French Literature
Prerequisite: 3000-level French course or consent of instructor. Reading and discussion of selected works from French literature. Three credit hours.

FREN 3334 French Culture and Civilization I
Prerequisite: FREN 2311 or equivalent (may be corequisite with consent of the instructor). Historical, sociological, and cultural background of the French people. Three credit hours.

FREN 3335 French Culture and Civilization II
Prerequisite: FREN 2312 or equivalent. A continuation of FREN 3334. Three credit hours.

FREN 3336 Francophone Cultures
Prerequisite: FREN 2311 or equivalent proficiency. History and culture of francophone communities outside of metropolitan France, including French overseas departments (Martinique, Guadeloupe), the Maghreb, West Africa, and North America (Quebec, Louisiana). Three credit hours.
Courses in German (GERM)

**GERM 1111 Elementary German Laboratory I**
Corequisite: GERM 1311. Supervised laboratory practice in listening, speaking, and aural comprehension of German. One credit hour.

**GERM 1112 Elementary German Laboratory II**
Prerequisite: GERM 1311 or equivalent. Corequisite: GERM 1312. Continuation of GERM 1111. One credit hour.

**GERM 1115, 1215, 1315 Conversational German**
Prerequisite: GERM 1215 or consent of instructor. A performance course with emphasis on elementary conversation and discussion. For students with a basic knowledge of German grammar. One, two, or three credit hours.

**GERM 1301 Reading German**
Essential grammar for reading German, with minor emphasis on pronunciation. Will not substitute for any other course in German. Three credit hours.

**GERM 1311 Elementary German I**
A course for beginners with no knowledge of German. Instruction in correct pronunciation, aural comprehension, and simple speaking ability. Three credit hours.

**GERM 1312 Elementary German II**
Prerequisite: GERM 1311 or equivalent. Practice in correct pronunciation, aural comprehension, and simple speaking ability leading to mastery of basic grammar and a limited reading ability. Three credit hours.

**GERM 2111 Intermediate German Laboratory I**
Corequisite: GERM 2311. Supervised laboratory practice in listening, speaking and aural comprehension of German at an intermediate level. One credit hour.

**GERM 2112 Intermediate German Laboratory II**
Corequisite: GERM 2312. Continuation of GERM 2111. One credit hour.

**GERM 2311 Intermediate German I**
Prerequisite: GERM 1312 or equivalent. The intermediate course leads to greater facility in the spoken language and to more advanced reading skills. Three credit hours.

**GERM 2312 Intermediate German II**
Prerequisite: GERM 2311 or equivalent. Continuation of GERM 2311. Three credit hours.

**GERM 2315 Intermediate German Conversation**
Prerequisites: GERM 2311, 2312 or instructor’s consent. A course to practice oral skills on a wide range of topics. Students will learn how to narrate, describe, compare, and comment. Three credit hours.

**GERM 2337 German Literature in Translation**
The study and reading of representative works (in English) of German prose, poetry, and drama. Will not apply toward a major or minor in German. Three credit hours.

**GERM 3115, 3116, 3117 Advanced German Conversation**
Prerequisite: GERM 2315 or higher or consent of instructor. A course leading to greater fluency in oral skills. Students work toward oral proficiency through discussions on specialized topics. One credit hour.

Courses in French (FREN)

**FREN 4141, 4142, 4143 French Practicum**
Prerequisite: FREN 3312 and two 3000-level French courses. Special problems in French syntax and stylistics. Offers students an opportunity to enrich and reinforce knowledge of syntax and stylistics for greater mastery in written communication. May be taken one hour per semester to a maximum of three hours.

**FREN 4316 Advanced Listening and Pronunciation**
Prerequisite: two 3000-level French courses. Advanced listening and pronunciation skills with reference to varieties of French spoken in the Francophone world. Three credit hours.

**FREN 4331 Writing: Historical Perspective**
Prerequisite: two 3000-level French courses. Reading and criticism of works of outstanding authors to the end of the 19th century. Three credit hours.

**FREN 4341 Writing: Modern Perspective**
Prerequisite: two 3000-level French courses. Reading and criticism of outstanding authors from the early 20th century to the present time. Three credit hours.

**FREN 4350 Senior Project**
Prerequisite: two 3000-level French courses. An independent project requiring research, oral presentation and written documentation under the guidance of French faculty. Topic must be approved prior to registration.

**FREN 4351 Cinema**
Prerequisite: two 3000-level French courses. Viewing and discussion of French films including how French films both shape and reflect aspects of French cultural identity.

**FREN 4361, 4262 Seminar in French Literature**
Prerequisite: two French literature courses or consent of instructor and two 3000-level French courses. Reading, discussion, and critical analysis of selected works from French literature. Three or two credit hours.

**FREN 4101, 4201, 4301 Independent Study**
Prerequisite: two 3000-level French courses and consent of the instructor. Reading from a selected bibliography of French authors. Credit is determined at the beginning of the course according to the problem and will not be altered. One, two, or three credit hours.

Courses in Spanish (SPAN)

**SPAN 1111 Elementary Spanish Laboratory I**
Corequisite: SPAN 1311. Supervised laboratory practice in listening, speaking, and aural comprehension. One credit hour.

**SPAN 1112 Elementary Spanish Laboratory II**
Corequisite: SPAN 1312. Continuation of SPAN 1111. One credit hour.

**SPAN 1301 Reading Spanish**
Essential grammar for reading Spanish with minor emphasis on pronunciation. Will not substitute for any other course in Spanish or apply toward a major or minor in Spanish. Three credit hours.

**SPAN 1311 Elementary Spanish I**
A course for students with no knowledge of Spanish. Instruction in correct pronunciation, aural comprehension, and simple speaking ability. Three credit hours.

**SPAN 1312 Elementary Spanish II**
Prerequisite: SPAN 1311 or equivalent. Practice in correct pronunciation, aural comprehension, and simple speaking ability leading to mastery of basic grammar and limited reading ability. Three credit hours.

**SPAN 1315 Conversational Spanish**
Prerequisite: SPAN 1312 or consent of instructor. A performance course with emphasis on elementary conversation and discussion. For students with a basic knowledge of Spanish grammar. Three credit hours.
SPAN 2311 Intermediate Spanish
Prerequisite: SPAN 1312 or equivalent. The intermediate course leads to a greater facility in the spoken language and to more advanced reading skills. Three credit hours.

SPAN 2315 Intermediate Spanish Conversation
Prerequisite: SPAN 2312 or consent of instructor. A course to practice oral skills on a wide range of topics. Students narrate, describe, compare, and comment. Three credit hours.

SPAN 3115, 3116, 3117 Advanced Spanish Conversation
Prerequisite: SPAN 2315 or higher or consent of instructor. A course to practice oral skills on a wide range of topics. Leads to expanded vocabulary mastery and greater fluency in the spoken idiom. May be taken to a maximum of three hours.

SPAN 3310 Communications: Presentational
Prerequisite: SPAN 2311. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the presentational mode. Three credit hours.

SPAN 3311 Communications: Interpersonal
Prerequisite: SPAN 2311. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpersonal mode. Three credit hours.

SPAN 3312 Communications: Interpretive
Prerequisite: SPAN 2311. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpretive mode. Three credit hours.

SPAN 3316 Spanish Phonetics
Prerequisite: SPAN 2312 or consent of instructor. The sounds and phonetic symbols of the Spanish language with reference to phrasing, stress, rhythm, and intonation. Three credit hours.

SPAN 3321 Spanish Short Stories
Prerequisite: SPAN 2312 or consent of instructor. Reading and criticism of short stories by outstanding authors. Three credit hours.

SPAN 3332 Introduction to Spanish Literature
Prerequisite: SPAN 2312. History of the literature of Spain from the medieval period to the present. Three credit hours.

SPAN 3333 Selected Readings in Spanish Literature
Prerequisite: 3000-level Spanish course or consent of instructor. Reading and discussion of selected works from Spanish and Spanish American literature. Three credit hours.

SPAN 3334 Hispanic Culture: Peninsular
Prerequisite: SPAN 2312 or equivalent (or corequisite with consent of instructor). Historical, sociological, and cultural background of the Iberian peninsula. Three credit hours.

SPAN 3335 Hispanic Culture: Americas
Prerequisite: SPAN 2312 or equivalent (may be corequisite with consent of the instructor). Historical, sociological, and cultural background of Hispano-America. Three credit hours.

SPAN 4311 Literature of the Golden Age
Prerequisite: 3000-level Spanish course. Selected dramatic and prose writings of the Golden Age. Three credit hours.

SPAN 4331 Nineteenth-Century Literature
Prerequisite: 3000-level Spanish course. Readings and criticism of outstanding authors of this period. Three credit hours.

SPAN 4341 Twentieth-Century Literature
Prerequisite: 3000-level Spanish course. Writings of the “Generation of ‘98” and more recent authors. Three credit hours.

SPAN 4351 Spanish American Literature
Prerequisite: 3000-level Spanish course. Reading of works by several representative Latin American authors. Three credit hours.

SPAN 4361, 4362 Seminar in Spanish Literature
Prerequisite: two Spanish literature courses or consent of instructor. Reading, discussion, and critical analysis of selected works from Spanish literature. Three credit hours.

SPAN 4101, 4201, 4301 Independent Study
Prerequisite: consent of instructor. Reading from a selected bibliography in Spanish. Credit is determined at the beginning of the semester by the complexity of the problem and will not be altered. Open only to majors. One, two, or three credit hours.
DEPARTMENT OF MUSIC

The art of music offers unique opportunities for cultural enrichment and creative development. At UALR we offer the bachelor of arts degree in music. Within the music major are four emphases: applied music, history and literature, theory, and applied music leading to vocal secondary education licensure. The minor in music is available in combination with such companion fields as journalism, business, theater, and radio, television, and film, as well as with other major degrees.

Central to the strength of the department is its strategic location in Little Rock, Arkansas’ capital city. Home of the Arkansas Symphony Orchestra, the Arkansas Jazz and Heritage Foundation, Ballet Arkansas, the Wildwood Center for the Performing Arts, ArtSpree, and numerous museums, theaters, and galleries, metropolitan Little Rock provides plentiful live arts exposure. In January 2001, the department opened a state-of-the-art technology and computer classroom and recording studio, combined in a suite of three classrooms, that includes a graphics technology classroom and a technical writing computer and technology classroom. In addition, a substantial collection of sound recordings and scores is maintained on campus at Ottenheimer Library.

Our faculty includes noted artists, teachers, and scholars. Music majors may take courses in performance study of classical music and jazz, electronic music techniques, music history, theory, and composition. Stella Boyle Smith Concert Hall, a 304-seat facility equipped with a Steinway concert grand piano and a Bösendorfer Imperial grand, is the setting for the many concerts hosted by the music department each year. A Hubbard French double-manual harpsichord is also available for music study and performance. Macintosh computers, the latest sequencing, transcription and theory software, plus a Roland digital keyboard lab enhance the study of past traditions with contemporary tools, lighting a path to the twenty-first century.

Scholarship aid is available to qualified university students for study in guitar/string instruments, piano, voice, brass and woodwind, and percussion. Additionally, substantial grant in aid is available for participation in one or all of the three choirs and the pep band. Music majors and minors as well as students who are not music students are eligible to apply. Interested students may call (501) 569-3294 for information on how to apply and for scholarship audition dates.

General Requirements

- All curricula leading to a music degree require proficiency in one or more performance media. This is accomplished by individual and group instruction in the medium best suited to the student’s abilities and goals. See applied areas for the specific offered.
- Each music major is required to participate in an ensemble appropriate to the student’s applied major and approved by the ensemble director a minimum of four semesters.
- Entrance examinations and auditions are given to entering freshmen and transfer students to determine placement in music theory, functional piano, and his or her major applied area.
- Music majors are required to receive credit in MUAP 1000 Recital Attendance for a minimum of six semesters. To receive a grade of "credit" in this course a student must attend a number of recitals equal to 80% of an approved list of recitals published by the music department before the second week of classes or a minimum of eight approved concerts or recitals. Substitutions of other recitals may be made with prior approval of the department chairperson or a designated representative.
- Music juries for majors are scheduled at the end of each semester. Students in the applied music emphasis must pass a qualifying jury at the end of their sophomore year and applied studies before entering upper-level applied study.
- Transfer students in performance degree programs must complete at least two consecutive semesters of applied study at the 3000-level at UALR before graduation.
- All music majors are required to pass a piano functional examination before graduation.
- All music majors, except the bachelor of arts emphasis in history and literature or theory, must meet their applied music requirement by taking at least half their applied hours which must be upper-level.
- Students not yet at freshman level in applied music may take applied music for credit. However, the numbering for this study begins with a zero and may not be applied toward a major or minor in music.

Secondary Teacher Licensure

See “Secondary Teacher Licensure” on page 45 for details. Students should contact the Department of Music at (501) 569-3294 about the curriculum.

Major in Music

A music major requires a minimum of 45 credit hours. There are four possible areas of emphasis in the bachelor of arts music degree. Majors may emphasize music performance, music history and literature, music theory, or applied music leading to vocal secondary education licensure. Students pursuing a professional career in music are advised that the master’s degree is often considered the minimum training necessary. Prospective music majors, whether or not they plan to go on to graduate school, should select major courses carefully with regular advising from the department faculty.

Students who are music majors, in an applied emphasis, voice principals, in an applied emphasis leading to secondary vocal licensure, and music minors who are taking private voice lessons and are enrolled in MUEN 4113 Concert Choir will be advised to take MUAP 1204 Class Voice I at the beginning of their freshman year or the first semester they are declared as a music major. Additionally, students taking private voice lessons and who are in MUEN 4113 Concert Choir, regardless of being a music major or minor, will be advised to take MUTH 1310 Music Fundamentals, MUAP 1214 Class Piano I (if they have little or no keyboard skills) and MUHL 3322 Survey of Western Art Music, all of which will count toward both the music major or music minor or may be used as general university course electives. Students taking private voice lessons who are music majors or minors will be advised to enroll in MUEN 4140 Community Chorus each semester they enroll in private voice lessons.

Music majors in the emphasis in applied music leading to vocal secondary education licensure track will be strongly encouraged to take MUTH 4310 Arranging or MUTH 4320 Composition I as the theory elective. Additionally, majors in this emphasis are required to take MUHL 3322 Survey of Western Art Music and MUHL 3381 American Music. Students in this emphasis will also be advised to complete at least two semesters in MUEN 4113 Concert Choir and to participate in MUEN 4140 Community Chorus each semester they are enrolled as a
music major. Music majors pursuing the licensure emphasis will be required to pass a piano/keyboard proficiency exam. For students entering with little or no piano/keyboard background, it may be necessary to take up to eight hours of piano/keyboard classes (MUAP 1214 Class Piano, 1244 Class Piano II, 2294 Class Piano III, and 3263 Piano Skills) in order to fulfill this requirement.

Music majors in the emphasis in applied music leading to vocal secondary education licensure track must meet with the music department chairperson each semester for advising.

Minor in Music

This curriculum is designed to provide opportunities in music learning for non-music major students through courses in listening, basic musicianship, music theory, music history, and courses of special interest to the student. The curriculum is not intended to prepare a student for a career in music and does not certify a student to teach privately or in public schools. A minor in music consists of 19 course hours, including:

- Two to five hours of music theory (MUTH), to be chosen from the theory course offerings in the department. MUTH 1310 Music Fundamentals is recommended.
- Six hours of music history and literature courses (MUHL), with emphasis on the development of heightened listening skills, covering the history and repertoire of musical style periods (e.g. Baroque or Classical) or musical genres (e.g. non-Western, American, jazz, blues, or rock).
- Eight to 11 hours of electives, to be chosen from departmental offerings in music history, theory, private instruction, applied class (voice, piano, and guitar), ensembles, and music education, with the added possibility of special studies in specific areas to be offered on the basis of student interest and need and the availability of faculty. Students taking private voice lessons (MUPR) will be advised to enroll in MUAP 1204 Class Voice I and MUAP 1214 Class Piano I as well as MUEN 4140 Community Chorus if their schedule permits.

The choice of the overall program design is subject to the approval of the chairperson of the music department or an advisor designated by the chairperson.

Bachelor of Arts in Music Curricula

Core Requirements (44 hours)¹

Second Language Proficiency²

Academic Minor Coursework (18 hours)

Major Requirements

- MUTH 2381 Music Theory I
- MUTH 2391 Music Theory II
- MUTH 3381 Music Theory III
- MUTH 2291 Aural Skills I
- MUTH 2292 Aural Skills II
- MUTH 3231 Form and Analysis
- MUHL 3322 Survey of Western Art Music
- MUHL 3381 American Music
- Music Ensemble (4 hours)
- Applied Study (4 hours)
- Upper-level Applied Study (4 hours)
- MUTH elective (3 hours)
- MUHL elective (3 hours)

Emphasis in Applied Music

Other music electives³ (6 hours)

Courses in Performance Studies (MUAP)

MUAP 1000 Recital Attendance

- Attendance at concerts, recitals, student convocations, etc., as required by departmental policies.

MUAP 1100 Third-Age Piano Class

Prerequisite: Consent of the instructor, designed for individuals who are interested in pursuing piano study in a less-formal group setting. Various technical, reading, and harmonization topics explored for performance of solo and ensemble works. May be repeated for credit. One credit hour.

MUAP 1201 Guitar Reading I

Prerequisite: MUAP 1203 with B or greater or consent of instructor based on audition to demonstrate familiarity with guitar and music fundamentals. Instrumental laboratory for guitarists, emphasizing reading studies in a variety of music styles. Two credit hours.

MUAP 1202 Guitar Reading II

Prerequisite: MUAP 1201 or consent of instructor. A continuation of Guitar Reading I with emphasis on chord chart reading. Comping in various styles will be discussed and more advanced materials will be used to improve simple line reading. Two credit hours.

Emphasis in History and Literature or Theory

Capstone MUTH or MUHL electives (4 hours)

Other music electives (6 hours)

Other electives (17 hours)

Capstone Experience

The capstone experience for the degree of bachelor of arts in music for students whose emphasis is applied music is a jury representing the culmination of at least two years (eight credit hours) of applied study. Four credit hours must be at the upper level, and attainment of the level of repertory outlined by the area faculty (voice, piano, string, percussion, or winds) must be demonstrated. This jury, typically given during the senior year, should demonstrate appropriate technical fluency and stylistic variety (for example, contrasting pieces) as determined by the applied music teacher.

For students whose emphasis is music history and literature or music theory, the capstone experience will be a paper completed during the senior year on a topic to be decided in consultation with the major teacher in that area.

Emphasis in Applied Music Leading to Vocal Secondary Education Licensure

See “Secondary Teacher Licensure” on page 45.

4. Electives must include conducting study as well as piano study if necessary for preparation for the piano proficiency examination.

MUAP 1203 Pop Guitar Class

- Designed as an alternative to conventional class guitar, this course teaches theory, technique, and control through the performance of songs in the pop-rock idiom. Class time is divided between the introduction of a concept or technique and its application in the songs provided. The course is open to anyone. Two credit hours.

MUAP 1204 Voice Class I

- For beginning voice students. Application of vocal principles to develop singing facility. Group application of proper breathing, phrasing, and general attributes of correct vocal production. Two credit hours.

MUAP 1214 Piano Class I

- For beginning piano students with little or no keyboard experience. Basic skills required to play the piano will be addressed in a group setting. Topics explored include piano technique, music reading, basic harmonization, transposition and theory and keyboard fundamentals. Two credit hours.

MUAP 1244 Voice Class II

- Prerequisite: MUAP 1204 or consent of instructor. Group vocal instruction with emphasis on the development of vocal technique and individual performance of art songs. Two credit hours.
MUAP 1264 Piano Class II  
Prerequisite: MUAP 1214 or consent of instructor. A continuation of Class Piano I designed to continue development of keyboard facility through technique, sight reading, harmonization, and a variety of solo and ensemble piano repertoire. Two credit hours.

MUAP 2284 Piano Class III  
Prerequisite: MUAP 1264 or consent of instructor. Designed to hone the skills introduced in Piano Class II, with an emphasis on sight reading, playing from lead sheets, and on playing a variety of intermediate solo and ensemble repertoire from various stylistic periods. Two credit hours.

MUAP 2350 Songwriting  
Organizational factors needed to identify the components of song form and integrate formal design and enlarged key areas into music. Designed for nonmusic and music majors. Three credit hours.

Courses in Music Education (MUED)

MUED 3322 Early Childhood Music  
The emphasis is on activities, creative projects, and developing vocal and instrumental skills useful to the early childhood teacher for both musical and nonmusical integrated classroom activities. Students will develop skills in making lesson plans for musical activities and integrating music with the other arts, other subjects, and other peoples, places, and cultures. Not open to music majors for credit. Two credit hours.

MUED 3302 Piano Pedagogy  
Prerequisite: completion of MU/PR 2226 jury, and MU/HL 2200, or consent of instructor. Study of methods and pedagogical material for piano teachers. Three credit hours.

MUED 3314 Vocal Pedagogy  
Study of methods and pedagogical literature for voice teachers. Three credit hours.

MUED 3315 Teaching Choral Music in the Secondary Schools  
An examination of materials and methods employed in middle school, junior high, and senior high choral music education. Emphasis on the general music program and nonperformance classes. Additional topics include procedures for administering choral and instrumental programs and scheduling. Three credit hours.

Courses in Applied Music – Ensemble (MUEN)

MUEN 1104, 2104, 3104, 4104 Techniques of Accompanying  
Prerequisite: audition. A course designed to equip the keyboard major to function as an accompanist. This course offers both theoretical and practical experience. One credit hour.

MUEN 1113, 2113, 3113, 4113 University Concert Choir  
Prerequisite: audition scheduled with instructor. For experienced choral singers; open to students of any major. The concert choir is a large, select soprano, alto, tenor, bass (SATB) choral ensemble that performs with repertoire of selections representative of the Renaissance through the contemporary periods. One credit hour.

MUEN 1117, 2117, 3117, 4117 Chamber Singers  
Prerequisite: consent of instructor; open to students of any major. A small, select soprano, alto, tenor, bass (SATB) choral ensemble that performs repertoire from various stylistic periods especially written for performance by a small ensemble. One credit hour.

MUEN 1137, 2137, 3137, 4137 Pop Choir  
Prerequisite: consent of instructor. Small, select soprano, alto, tenor, bass (SATB) choral ensemble performing pop choral arrangements. Includes instrumental accompaniment. One credit hour.

MUEN 1140, 2140, 3140, 4140 Community Choir  
Prerequisite: audition and consent of instructor. Open to community members, UALR students, faculty, and staff of all experience levels. Prepares and performs major choral literature. May be repeated for credit. One credit hour.

MUEN 1150, 2150, 3150, 4150 Opera Performance  
Prerequisite: consent of instructor; open to students of any major. Study, through exercises and performances of acting techniques, that aids the singing-actor in the dramatic presentation of operatic repertoire. Once credit hour.

MUEN 2154, 2254, 2354 Special Topics  
Prerequisites: MUTH 1204, 1244; 1214, 1264.; or consent of instructor. Class vocal or piano instruction in various forms of musical repertoire and style, such as musical theatre, jazz, and pop, or religious solos. One, two, or three credit hours.

MUAP 3224 Conducting I  
Prerequisite: MUTH 2381 or consent of instructor. Fundamentals of conducting applicable to both instrumental and choral ensembles; patterns and basic conducting techniques; conducting of musical examples in both genres. Two credit hours.

MUAP 3265 Piano Skills  
Prerequisite: MUAP 2284 with a grade of B or higher, and MUTH 2391, or consent of instructor. Beginning with an intensive review of basic functional piano skills, more advanced sight reading at the keyboard, harmonization skills, improvisation techniques, simple accompaniments, and solo piano repertoire will be explored. Two credit hours.

MUAP 3325 Conducting II  
Prerequisite: MUTH 3224 or consent of instructor. Conducting techniques relative to both choral and instrumental ensembles, including blend, balance, phrasing, dynamics, instrumental transposition, expressive devices and basic styles of choral/instrumental music literature; conducting of musical examples in both genres. Three credit hours.

MUED 3322 Music in the Elementary Grades  
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. Three credit hours.

MUED 3332 Public School Music for Elementary Teachers  
Provides instruction in rudiments of music; gives training in musical activities suitable for children through laboratory, lecture, and participation. Examines methods and materials for successfully teaching music to children in the elementary grades. Not open to music majors for credit. Three credit hours.

MUED 3352 Business of Music  
The entire scope of the music industry is presented in a systematic, comprehensive review; from songwriters through publishing and record companies to television and radio. Three credit hours.

MUED 4352 Piano Practicum  
Prerequisite: MUED 3302 and completion of MUPR 2226 jury. Practice teaching and observation of class instruction in piano at beginning levels for children and adults, and of individual instruction in piano from elementary through intermediate levels. Lesson plans and procedures for teaching specific concepts in piano performance. Three credit hours.

MUEN 4192, 4292, 4392 Special Studies and Workshops  
Prerequisite: consent of music chairperson. Individual and group participation in special studies and workshops in music education. One, two, or three credit hours.

MUEN 1153, 2153, 3153, 4153 Jazz Ensemble  
Prerequisite: consent of instructor. An ensemble studying and performing music in the jazz and jazz-rock styles, with emphasis on instrumental repertoire. One credit hour.

MUEN 1160, 2160, 3160, 4160 Jazz Combo  
Prerequisite: consent of instructor. A small ensemble studying and performing music in jazz styles. One credit hour.

MUEN 1167, 2167, 3167, 4167 University Gospel Chorale  
A performance class that develops the execution of traditional, standard, contemporary, and original compositions of African-American gospel music. Vocal and instrumental techniques, as well as ensemble and improvisational skills, will be developed and improved. One credit hour.

MUEN 1173, 2173, 3173, 4173 Percussion Ensemble  
Prerequisite: consent of instructor. A small ensemble featuring repertoire written for a number of percussion instruments. One credit hour.

MUEN 1183, 2183, 4183 Piano Ensemble  
Prerequisite: consent of instructor. Ensemble performance involving piano duos from various musical periods. One credit hour.

MUEN 3183 Piano Ensemble  
Prerequisites: two semesters of MUPR 2226 (applied piano), consent of instructor. Ensemble performance involving piano duos from various musical periods. One credit hour.

MUEN 1188, 2188, 3188, 4188 Guitar Ensemble  
A performance class for guitarists and bass guitarists. Standard and original works arranged in jazz, pop, and rock styles; will develop reading ability, as well as ensemble and improvisational skills. One credit hour.

MUEN 1194, 2194, 3194, 4194 Basketball Band  
Prerequisite: consent of instructor. An ensemble that performs at UALR basketball games. One credit hour.
MUEN 1196, 2196, 3196, 4196 Chamber Ensembles
Prerequisite: consent of instructor. Small chamber ensembles, such as trios, quartets, quintets, of woodwinds, brass, and stringed instruments for chamber music experiences. One credit hour.

MUEN 4101 Community Orchestra
Prerequisite: consent of instructor; no audition required. Open to community members, UALR students, faculty, and staff of all experience levels. Prepares and performs music in all styles in the full orchestra medium. May be repeated for credit. One credit hour.

Courses in Music History and Literature (MUHL)

MUHL 2200 Introduction to Music
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of music, vocabulary and descriptive terms used in the musical arts, and how to write about them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with ARHA 2200 and DRTH 2200. Two credit hours.

MUHL 3121, 3221, 3321 Special Topics
Special topics in music history and literature. Features certain composers, styles, media, or periods, such as Beethoven symphonies, African-American gospel music, and chamber music. One, two, or three credit hours.

MUHL 3322 Survey of Western Art Music
Prerequisite: MUHL 2200. A survey of the development of Western art music from antiquity to the present, and an introduction to selected non-Western traditions, with emphasis on the study of music literature through recordings. Required for all BA music major emphases. Lecture. Three credit hours.

MUHL 3331 Music History I
Prerequisites: MUHL 2200, MUTH 2131. A survey of the development of music in western civilization from antiquity to 1750, with emphasis on the study of music literature through source recordings. Three credit hours.

MUHL 3341 Music History II
Prerequisites: MUHL 3331, MUTH 2391. A continuation of Music History I. A survey of music in Western civilization from 1750 to the present. Three credit hours.

MUHL 3351 The History of Rock
A study of the evolution of rock music from its pre-rock origins to the present. Three credit hours.

MUHL 3361 Jazz History and Styles
Prerequisite: MUHL 2200, 3341, or consent of instructor. A study of the development and styles of jazz music and its principal exponents. Three credit hours.

Courses in Music Theory (MUTH)

MUTH 1211 Rhythmic Skills
The rhythmic component of the music fundamentals package. This course will help develop the rhythmic control, accuracy, and notation skill necessary for performance, composition, and music education. Class time will be devoted primarily to ensemble performance of rhythms and development of rhythmic sight-reading ability. Lecture and laboratory. Two credit hours.

MUTH 1310 Music Fundamentals
This course is designed to serve both as a preparatory music theory course for the music major and as a music fundamentals course for the non-major or music minor. This course will fulfill the MUTH requirement for the minor. Students will learn about the fundamental rhythmic, melodic, and harmonic practices in Western music and the notational terms and symbols commonly used to communicate these aspects of a musical language. In addition to the study of written materials, students participating in this web-enhanced class will gain basic keyboard knowledge, basic aural skills and fundamental theory concepts through the use of computer-based theory tutorial software and various web-based theory tutorials. Lecture, laboratory, and online components. Upon completion of this course, students wishing to continue with music theory courses will be required to pass a theory fundamentals assessment with a grade of 80% or greater. Three credit hours.

MUTH 2291 Aural Skills I
Prerequisite: MUTH 1310. Corequisite: MUTH 2381. Diatonic music will be the focus of sight singing and dictation exercises. Listening techniques will include error detection, chord identification, triad factor identification, nonharmonic tones, and melodic dictation and sight-singing. The lab component will emphasize interval recognition and diatonic chord progressions. Lecture and laboratory. Two credit hours.

MUTH 2292 Aural Skills II
Prerequisites: MUTH 1310, 2291. Simple chromatic usage will be featured in melodic and harmonic dictation exercises. Musical examples will include chordal phrases, chord identification, error detection, two phrase music, two-part dictation and sight-singing short melodies from music literature. The lab component will emphasize melodic error correction, harmonic progressions, and melodic and rhythm dictation. Lecture and laboratory. Two credit hours.

MUTH 2310, 3220, 3320 Special Topics
Prerequisite: four semesters of theory or consent of instructor based on placement examination. Harmonic or formal practices and styles such as fugue, sonata form, serial composition, or form and analysis. One, two, or three credit hours.

MUTH 3231 Form and Analysis
A survey of forms, shapes and genres in music of the common practice period (1600–1900) emphasizing the designations and categories of form. Principles of variety and unity and the language of musical analysis in standard tonal structure will be the topic of study. Two credit hours.

MUTH 3330 Jazz Theory
A theoretical survey of jazz harmonic, melodic, and rhythmic principles beginning with blues and modal vehicles. Lecture and laboratory. Three credit hours.
Group and Private Lesson

Group Lessons (MUAP)

The following performance classes are recommended for students with little or no formal musical training, who need to learn fundamentals of performance technique and reading music notation:

- **MUAP 1203 Pop Guitar Class**
- **MUAP 1204 Voice Class I**
- **MUAP 1214 Piano Class I**

Music Majors, Minors, and Elective Students (MUPR)

Private music lessons (one-to-one instruction) are available in the areas of guitar, piano, voice, percussion, and several other instrumental areas. Credits earned on the basis of lesson duration. An upper-level course number implies advanced proficiency in performance technique and repertoire.

- **MUPR 1xxx** Minor or elective study, may be repeated for credit
- **MUPR 2xxx** First year principal performance area for music major, 2 semesters. By audition only.
- **MUPR 3xxx** Second year major study, 2 semesters. By passing jury for MUPR 2xxx only.
- **MUPR 4xxx** Optional third year major study, 2 semesters. By passing jury for MUPR 3xxx only (may be repeated for credit).

A one-credit lesson means a 30-minute lesson weekly, and requires a minimum of one hour of daily practice. A two-credit lesson means a 55-minute lesson weekly, and requires a minimum of two hours of daily practice. BA music majors are expected to perform at least once per year in a public recital such as Student Recital Hour.

An applied music fee is charged for all individual instruction. See “Tuition and Fees” on page 21. Audition repertoire guidelines are available from the instructor in each performance area, and on the department web site at [http://www.uaalr.edu/mudept/schlrshps.html](http://www.uaalr.edu/mudept/schlrshps.html).

Areas of instruction offered:

- 05 Trumpet
- 06 Percussion
- 15 French Horn
- 16 Voice
- 17 MIDI
- 25 Trombone
- 26 Piano
- 27 Jazz Piano
- 28 Improvisation
- 35 Euphonium
- 36 Harpsichord
- 45 Tuba
- 46 Organ
- 50 Classical Guitar
- 51 Electric Bass Guitar
- 55 Flute
- 56 Violin
- 65 Clarinet
- 66 Viola
- 75 Oboe
- 78 Jazz Guitar
- 79 Electric Guitar
- 76 Cello
- 85 Bassoon
- 86 String Bass
- 87 Jazz Bass
- 95 Saxophone
- 96 Harp

MUPR 4230 Advanced Composition

Prerequisite: MUTH 3330 or consent of instructor. In this course, students write original compositions in the jazz idiom for varied media. Three credit hours.

MUTH 3381 Music Theory III

Prerequisites: MUTH 2391 and MUTH 3292 with grades of C or greater for declared music majors or consent of instructor or department advisor. This third course in the music theory sequence will predominately focus on the chromatic elements found in texture, harmony, and melody of the music of the Romantic era as well as some of the chromatic elements within the Classical and Baroque eras of Western music. Students will gain and demonstrate knowledge of the period through written traditional Roman numeral score analysis, macro-analysis, chord building exercises, four-voice part-writing exercises, choral, keyboard, chamber instrumental music, and performance of keyboard reductions of sections from a variety of symphonic works; and, identify both aurally and through written score analysis characteristic modalities, harmonies (diatonic and chromatic), phrase and cadence types, and structural components of typical Beethoven, Chopin, and Wolf instrumental and vocal composition. Lecture and laboratory. Three credit hours.

MUTH 4230 Basic Composition

Prerequisite: MUTH 2391 or consent of instructor. A study of methods and styles of musical compositions written by students. Various methods of beginning an original composition are discussed and demonstrated in addition to lectures and demonstrations on the small forms of composition. Students have the opportunity to apply prior theory knowledge and receive individual attention. Three credit hours.

MUTH 4340 Jazz Composition

Prerequisite: consent of music chairperson. Special individual or group research in music theory. One, two, or three credit hours.

College of Arts, Humanities, & Social Sciences

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DEPARTMENT OF THEATRE ARTS & DANCE

The Department of Theatre Arts and Dance seeks to cultivate an understanding and appreciation of theatre and dance and to provide the knowledge, skills, and experience necessary for advanced study and work in the field. Taught within the context of arts and humanities, students learn the technical and aesthetic aspects necessary for performance and develop a broader understanding of the arts and the special role the arts play in interpreting our history and society.

All majors and minors in the theatre and dance concentrations are required to meet with their departmental advisor prior to registration each semester.

Major/Minor in Theatre Arts

The major/minor program in theatre arts requires 47 credit hours, including DRE 1180, 1380, 2310, 3380; DRTH 2200, 2352, 4350, 4351; DRPE 2360, 3350, 3362; DANC 1251; and ENGL 4324. The 2200 course may be satisfied by the core curriculum courses, FNAR 2300 or 2301.

For the major, a total of six credit hours of production experience, or the equivalent is required, at the rate of one credit hour per semester. This requirement may be met by stage production courses (DRPE 1160, 1161, 2160, 2161, 3160, 3161, 4161, and 4162).

In addition, the major requires six upper-level credit hours of theater electives. Three of these hours should be in theatre performance studies.

All participants in theatre arts programs are expected to follow rules and regulations specified in the departmental handbook.

Minors in Theatre Arts

The department offers minors in theatre arts, and theatre dance. The minor programs are designed to provide broad-based programs of courses in theory, performance, and stage production for interested students. The theatre arts minor requires 18 hours including DRTH 2200, one theory course, one performance course, and one technical course, plus a total of three credit hours of production experience or the equivalent. The production courses should be taken at the rate of one credit hour per semester from DRPE 1160, 1161, 2160, 2161, 3160, 3161, 4161, or 4162 Stage Production.

Minor in Dance for the Theatre

The minor in theatre dance requires 18 hours, and must include at least one course in each of the following areas: Ballet, Modern, Jazz, Tap, and Theatre Dance, as well as these courses:

- DANC 3271 Choreography I
- DANC 3311 History and Philosophy of Dance
- DRPE 2359 Musical Theatre Workshop

More experienced dancers may audition before the dance faculty prior to the beginning of each semester for placement into advanced dance courses. All dance courses are repeatable.

Courses in Dance (DANC)

DANC 1179 Effort Shape
Exploration of various factors of dance in performance, including exertion, tension, weight, time, and space, contributing to patterns of movement. One credit hour.

DANC 1210 Improvisation
The course gives students an opportunity to discover movement creatively. Two credit hours.

DANC 1211, 1212 Ballet I and II
Elementary classical ballet stressing placement, terminology, basic barre, adagio, allegro with combinations. DANC 1212 is a continuation of DANC 1211. Two credit hours.

DANC 1221, 1222 Modern I and II
Basic course exploring beginner levels of modern dance, with basic dance movement in terms of body placement, direction, rhythm, dynamics, space, and motivation. DANC 1222 is a continuation of DANC 1221. Two credit hours.

DANC 1231, 1232 Jazz I and II
Beginner jazz course. Explores placement, rhythm, lyrical, and percussive style. A continuation of DANC 1231. Two credit hours.

DANC 1241, 1242 Tap I and II
Exploration of tap and musical comedy dance forms. DANC 1242 is a continuation of DANC 1241. Two credit hours.

DANC 1251, 1252 Theatre Dance I and II
Individual and group work in improving posture, movement, and physical expressiveness for actors, singers, dancers, and musicians working in production. DANC 1252 is a continuation of DANC 1251. Two credit hours.

DANC 1254 Dance I for Majors
Theory and practice needed to understand and develop an adequate level of skill; methods and techniques of teaching folk, square, and social dance. Two hours lecture, three hours laboratory. Two credit hours.

DANC 2173 Dance Ensemble I
Participation in audition, rehearsal, and performance of dance in musical comedy, opera, gallery, environment, lecture/demonstrations, and concerts. One credit hour.

DANC 2174 Dance Ensemble II
Participation in audition, rehearsal, and performance of dance in musical comedy; opera, gallery, environment, lecture/demonstrations, and concerts. One credit hour.

DANC 2175 Partnering I
Prerequisites: DANC 1211, 1221, 1231. Basic principles for partnering in ballet, modern, and jazz. One credit hour.

DANC 2177 Dance Repertory I
Prerequisites: DANC 1212, 1222. Study of works of ballet, modern, jazz. One credit hour.

DANC 2211, 2212 Ballet III and IV
Prerequisite: DANC 1212. Intermediate classical ballet stressing placement, terminology, barre, adagio, allegro with turns and combinations. Beginner partnering and poine work by audition. Performance stressed. DANC 2212 is the second part of DANC 2211. Two credit hours.

DANC 2221 Modern III
Prerequisite: DANC 1222. Continued study of modern dance techniques involving variations using rhythm, dynamics, balance, falls, recovery, spirals. Two credit hours.

DANC 2222 Modern IV
Prerequisite: DANC 2221. Exploration of elements of movement, space, time, focus, path, planes, and pulse. Two credit hours.

DANC 2231 Jazz III
Prerequisite: DANC 1232. Intermediate jazz technique stressing variations, turns, and combination work. Two credit hours.

DANC 2232 Jazz IV
Prerequisite: DANC 2231. Continuation of intermediate jazz techniques. Two credit hours.

DANC 2251 Theatre Dance III
Prerequisite: DANC 1252 or 2231. Movement for actors, singers, dancers, and musicians working toward production. Continuation of DANC 1251 and 1252. Two credit hours.

DANC 2252 Theatre Dance IV
Prerequisite: DANC 2251 or 2231. Movement for actors, singers, dancers, and musicians working toward production. Continuation of DANC 2251. Two credit hours.
DRTH 2200 Introduction to Theatre and Dance
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of theatre and dance, vocabulary and descriptive terms used in these disciplines, and how to write about them. Attendance at arts events is required. Students learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with ARHA 2200 Introduction to Visual Arts and MUHL 2200 Introduction to Music. Two credit hours.

DRTH 2352 Script Analysis for Production
Basic script analysis from the viewpoint of the playwright, performer, director, and designer; an intense analysis of representative plays. Three credit hours.

DRTH 3340 Seminar in Contemporary Theatre Production
A seminar in contemporary theatre production which may include a New York City theatre tour or a trip to other theatrical centers. Students are required to write a paper reflecting an area of knowledge gained from this theatrical experience, to be presented on return to campus. Three credit hours.

DANC 2270 Dance Production
An introduction to the technical skills required for a quality dance production; coordination of music, sound, and lights; creating costumes and makeup; the basic techniques of management and publicity. Two credit hours.

DANC 3211 Ballet V
Prerequisite: DANC 2212. Advanced classical ballet stressing beats, jumps, turns, pointe work, partnering, repertory, and performance. Two credit hours.

DANC 3212 Ballet VI
Prerequisite: DANC 3211. Second part of advanced classical ballet, stressing beats, jumps, turns, pointe work, partnering, repertory, and performance. Two credit hours.

DANC 3221 Modern V
Prerequisite: DANC 3222. Intermediate modern dance with emphasis on various styles and repertory works aimed toward performance. Two credit hours.

DANC 3222 Modern VI
Prerequisite: DANC 3221. Continued emphasis on various styles, combinations, and repertory works for performance. Two credit hours.

DANC 3271 Choreography I
Prerequisites: DANC 3221, 3211 or previous dance experience. Introduction to basic elements of composition. Focus on the fundamental elements which give form to dance. Two credit hours.

DANC 3272 Choreography II
Prerequisite: DANC 3271. Exploration of time-space factors in movement. Focus on dynamics, rhythm, design, gesture, and motivation as the elements that give form to dance. Two credit hours.

DANC 3311 History and Philosophy of Dance
A survey of dance styles from lineage-based societies through contemporary dance. Three credit hours.

Courses in Dance Activities (DNAC)

DNAC 1124 Folk and Square Dance
Fundamental movement patterns; step analysis, techniques of leading and following, dance positions, and dance formations in folk and square dance. One credit hour.

DNAC 1125 Ballroom Dance
Fundamentals in ballroom dancing, dance posture, footwork, leading and following, positions, etiquette, steps, and patterns. Dances will include two-step, cha-cha, waltz, swing-jitterbug, lindy, shag, fox trot, rhumba, Charleston, tango, and contemporary dances. One credit hour.

DNAC 1126 Tap Dance I
Relationship of style and characteristics to various types of tap dance. Emphasis on rhythmic accuracy, analysis, repertory, and composition. Specific teaching methods will be included. One credit hour.

DNAC 1127 Jazz Dance I
Introduction to basic techniques of jazz, with emphasis on specific teaching methods. One credit hour.

DNAC 1128 Modern Dance I
Introduction to fundamentals of modern dance, elements and qualities of movement, classification of movement, conditioning exercise, and individual and group studies combining dance movements. One credit hour.

DNAC 1129 Ballet I
Introduction to basic techniques of ballet. One credit hour.

DNAC 1130 Aerobic Dance
A dance exercise class that provides an opportunity for students to tone muscles; condition the heart, lungs, and blood vessels; burn calories; and relax. One credit hour.

DNAC 2128 Modern Dance II
Prerequisite: DNAC 1128 or equivalent. Review of fundamentals of modern dance. Theory and practice of dance composition, with emphasis on improvisation and performance. One credit hour.

DNAC 2129 Ballet II
Prerequisite: DNAC 1129 or equivalent. Review of fundamentals of ballet. Intermediate techniques of ballet. One credit hour.

DNAC 3129 Ballet III
Prerequisite: DNAC 3129 or equivalent. Refinement of techniques needed for adagio and allegro combinations. One credit hour.

DNAC 4129 Ballet IV
Prerequisite: DNAC 3129 or equivalent. Theory and practice to develop individual style and teaching responsibilities. One credit hour.

Courses in Drama Theory (DRTH)

DRTH 4140, 4240, 4340 Special Topics in Theatre Arts
Special topics for the study of plays, playwrights, theatrical periods, styles, and production methods. Emphasis on directed readings, research, and casebook studies. The content and course subtitle change each time offered. Refer to semester class schedule for a descriptive title of the content. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, or three credit hours.

DRTH 4350 History of Theatre I
Prerequisite: DRTH 2200 or consent of instructor. Stage conventions, theatre architecture, dramatic literature, and acting styles trace the history of theatre from its origins to the Restoration. Three credit hours.

DRTH 4351 History of Theatre II
A comprehensive view of the development of theatre from the Restoration to the present. Three credit hours.

DRTH 4352 Dramatic Criticism
Prerequisite: senior standing. A study of critical theories of the theatre from Aristotle to the present. Three credit hours.

DRTH 4359 Playwriting
Various projects in creative writing for the theatre; studies in development of plot, action, character, and dialogue. Each student is required to complete an original script. Three credit hours.
Courses in Dramatic Arts Technologies (DRAT)

DRAT 3310 Computer Rendering
Prerequisite: DRTE 1380, or consent of instructor. Instruction in the use of computers and software/hardware applications as tools toward an actualized final dramatic design rendering and/or choreography. Emphasis will include computer rendering techniques, hard-copy acquisition, and practical presentation/delivery issues. Laboratory required. Three credit hours.

DRAT 3314 Computer Aided Design in the Dramatic Arts I
Prerequisite: DRTE 1380, or consent of instructor. Introduction to computers as a dramatic design and drafting tool. Computer specific techniques for 2-D design, drafting, and data processing as it relates to the design. Laboratory required. Three credit hours.

DRAT 3320 Animation in the Dramatic Arts
Prerequisite: DRTH 2200 or consent of instructor. Introduction to 3-D computer animation and graphics in the dramatic arts as they relate to design (scenic, lighting, kinetic, etc.), performance, and narrative aesthetics. Students will explore and acquire a working knowledge of professional, mid-range hardware and software packages in relation to basic 3-D modeling, scene and animation layout, rendering, etc. Laboratory required. Three credit hours.

Courses in Drama Performance (DRPE)

DRPE 1160, 1161, 2160, 2161, 3160, 3161, 4161, 4162 Stage Production
Prerequisite: consent of the department chairperson needed if more than one credit hour is desired in any one semester. Emphasizes the practical application of performance and technical theatre principles through participation in stage productions sponsored by the department. Courses 3160, 3161, 4161, and 4162 require higher levels of responsibility and achievement. One credit hour.

DRPE 1260 Stage Combat
Techniques of stage fighting, falls, faints, slaps, and use of weapons and athletic movement on stage. Two credit hours.

DRPE 2359 Musical Theatre Workshop
A performance course in the techniques of musical theatre; involves acting, dancing, and singing in the theatrical context. Three credit hours.

DRPE 2360 Acting I
Basic theories of acting with projects and illustrations of various aspects of acting, character analysis, and creative process. Three credit hours.

DRPE 3330 Oral Interpretation
Prerequisite: a course in English literature. A study of oral interpretation as a means of understanding literature as experience. Focus on the study of contemporary poetry and short fiction through performance of the speaking voices. Three credit hours.

DRPE 3332 Readers’ Theatre
Adapting and performing materials for readers’ theatre. Three credit hours.

DRPE 3350 Voice and Movement
Prerequisite: DRPE 2360, consent of the instructor. Focuses on building a process for correct, healthy voice usage in performance, in combination with movement training. Three credit hours.

DRPE 3351 Acting II
Prerequisites: DRTH 2200 and DRPE 2360. A performance course in script analysis and characterization. Emphasis on scene study, development of skills in character conception, and performance theory. Three credit hours.

DRPE 3360 Children’s Theatre
Various techniques used in producing children’s theatre with adult actors. Experience in scene design, lighting, costume, acting, directing, and promotion. Class work plus participation in at least one production of a full-length play.

DRPE 3361 Theatre Practicum
Designed for advanced theatre students; covers all phases of play production. Participation in plays is required. Three credit hours.

DRPE 3362 Directing I
Prerequisites: DRTH 2200, DRPE 2360, junior standing, consent of instructor. Introduction to the basic principles and techniques of stage direction. Students gain practical experience by directing several short scenes. Three credit hours.

DRPE 3363 Directing II
Prerequisites: DRPE 2360, 3362. An advanced directing course dealing with the theory of directing and its practical application. Students are required to direct a one-act play. Three credit hours.

DRPE 3364 Experimental Theatre
Prerequisites: DRPE 2360, 3362, consent of instructor. A senior-level course for advanced students interested in working with new scripts or original ideas of making a play in an experimental situation. Open to actors, directors, and playwrights who have had the lower-level courses in those areas. Three credit hours.

DRPE 4160, 4260, 4360 Independent Study
Prerequisites: senior standing, theatre arts major, consent of instructor. Advanced research on selected topics. One, two, or three credit hours.

DRPE 4369 Internship in Theatre Performance
Prerequisites: DRPE 1160, 2160, 3160; for an internship with an acting concentration: DRPE 2360, 3350 or 4350; performance in at least one major production; for directing concentration: DRPE 2360, 3362, 4331, direction of department production with at least one (and preferably three) acts; for dance concentration: DRPE 1251, 1252, performance in at least one major dance concert. An advanced performance course in which the student will work with established theatre/dance groups. The student must apply for a faculty supervisor for the project and obtain approval of the department chairperson. The assignment will be off campus with a professional group. Three credit hours.

Courses in Design/Technical Theatre (DRTE)

DRTE 1180 Theatrical Makeup
A practical course in makeup for the stage. Includes theory, types, designs, and application of makeup for the theatre. One credit hour.

DRTE 1380 Stagecraft
Study of technical production, terminology, and techniques. Subjects include tools and materials, construction, scene painting, rigging, and staging techniques. Course includes lecture and production involvement. Laboratory required. Three credit hours.

DRTE 2310 Costume Techniques
The student receives instruction and practice in basic machine and hand sewing techniques, use of commercial patterns, and basic garment production. Three credit hours.

DRTE 2382 Makeup II
Prerequisite: DRTE 1180. Students will study advanced makeup techniques with emphasis on three-dimensional work such as prosthetics and life masks. Three credit hours.

DRTE 3380 Stage Lighting
Study of lighting for the theatre. Introduction to principles, equipment, and class projects in lighting design. Laboratory required. Three credit hours.

DRTE 3381 Scene Design
Prerequisite: DRTE 1380. Application of design theory to the theatre. Introduction to periods, styles, and techniques of scenic embellishment. Class projects in script analysis, sketching, rendering, and model construction. Three credit hours.

DRTE 3382 Costume Design
Introduction to costume design for theatre. This course utilizes dramatic literature as a source for text analysis, design theory application, research, and oral and visual communication techniques. Three credit hours.

DRTE 3383 History of Costume
Survey of all major periods of Western costume history prior to the 20th century, with emphasis placed on the link between fashion and culture. Examination of gender roles and manners. Three credit hours.

DRTE 4180, 4280, 4380 Independent Study
Prerequisites: senior standing, theatre arts major, consent of instructor. Advanced research on selected topics. One, two, or three credit hours.

DRTE 4381 Theatre Management
A comprehensive view of theatrical producing and management in America; history, theory, and practice. Includes legal, operational, and policy-making procedures, public relations and publicity, finance and budget control, press control, press relations, box office procedures, and house management. Three credit hours.
DRTE 4382 Theatre Architecture
An in-depth study of theatre architecture from primitive to present, with emphasis on the evolution of architectural elements and new theatre design concepts. Three credit hours.

DRTE 4383 Internship in Technical Theatre
Prerequisites: DRTH 1160, 2160, 3160; for an internship with a design concentration: DRTH 3380 or 3381, experience on a major technical/design project as crew head; for costume concentration: DRTH 2310, 3382, 3383, experience on a major costume project as crew head; for management concentration: DRTH 4350 or 4351, 4381. An advanced technical course in which students work off campus in a technical capacity with established professional theatre/dance groups. The student must apply for a faculty supervisor for the project and obtain consent of the department chairperson. Three credit hours.
The Department of Philosophy and Liberal Studies offers undergraduate instruction leading to the baccalaureate degree in philosophy, a minor in religious studies, and a minor combining study in philosophy and religious studies. There is also an emphasis in legal and moral studies within the baccalaureate degree in Philosophy that prepares students for early acceptance into the UALR School of Law. The department also coordinates an undergraduate interdisciplinary degree in liberal arts, as well as graduate study leading to the master of arts in liberal studies. For more information, see http://www.ualr.edu/philosophy/.

Major in Philosophy
Why study philosophy?
Because making a living is not the same as having a life. In Plato’s Republic, Socrates tells a story about the navigator on a ship who is thrown overboard by the sailors, who see him as a useless stargazer: what is useful depends on whether you are focused on the task of steering the ship or the science of guiding it. To decide the right course of action, to wonder if a law is just, to analyze a speech or an article in the newspaper, to ask what you can do to help others or yourself, to engage any of the issues that make our lives worthwhile and meaningful—is to do philosophy. The choice is not whether to do philosophy, but whether to do it well or poorly, to live or merely exist.

Because it is practical. When you study philosophy you learn how to think critically about any topic. That is why philosophy majors consistently score higher than other majors on the LSAT, GMAT, and GRE tests. The ability to think critically, argue persuasively, and solve problems—which are the foci of philosophical training—have become increasingly necessary for success in the rapidly changing work environment in which we live. The study of philosophy is an excellent preparation for the study of law, medicine, business, or theology.

Joint Bachelor of Arts degree in Philosophy (emphasis in Legal and Moral Studies) and Juris Doctor degree
The emphasis on legal and moral studies within the philosophy major is a cooperative program between the Department of Philosophy and the UALR School of Law. This early acceptance program allows students to earn a BA and juris doctor (JD) in six years of full-time study (effectively fulfilling their minor requirements with their first successful year at the Law School), and guarantees acceptance into the UALR School of Law to those students who maintain the required standing in the program and fulfill certain requirements. Students in the program enter the School of Law in the beginning of their fourth year of undergraduate study. At the end of successful completion of the first year of the law curriculum, the students are awarded a BA in philosophy. At the end of their third year of study (or equivalent) at the School of Law, they are awarded a JD. For more information about the joint program, visit: http://www.ualr.edu/philosophy/lawprogram/law.htm

Students must complete a second-year jurisprudence course as a requirement for the JD. The requirements for acceptance into the School of Law are the following:

1. Fulfill all requirements for a major in philosophy with an emphasis on legal and moral studies
2. Fulfill all UALR Core Curriculum and second language requirements, with the exception of a minor in a field other than philosophy (the minor is replaced by the first year of law school)
3. Achieve a minimum grade point average of 3.5
4. Score in the 75th percentile or above on the LSAT

Students who do not meet these criteria may complete their undergraduate degree and apply to the William H. Bowen School of Law at the end of the equivalent of their fourth year of undergraduate study.

Bachelor of Arts in Philosophy
Core Requirements (44 hours)¹
Second Language Proficiency²

Philosophy Major Requirements (30 hours)
PHIL 1310 Introduction to Philosophy
PHIL 1330 Introduction to Critical Thinking, or PHIL 2350 Introduction to Logic, or LIST 3310 Reasoning Across the Disciplines
PHIL 2320 Ethics and Society
PHIL 3320 Modern Philosophy
PHIL 3345 Ancient Philosophy
15 hours of philosophy electives, 9 of which must be at the 3000-4000 level.

Philosophy majors should complete all required courses for the major as early as possible, since these courses serve as background for elective courses. Ancient Philosophy and Modern Philosophy are taught every third semester; philosophy majors who have completed their introductory work should plan to take these courses when offered.

¹. See “Core Requirements for Bachelor Degrees” on page 27.
². See “Second Language Requirement” on page 27.
Joint Degree: Bachelor of Arts in Philosophy – Legal and Moral Studies Emphasis, Juris Doctor

Core Requirements (44 hours)¹

Second Language Proficiency²

Philosophy Requirements (30 hours)
- PHIL 1310 Introduction to Philosophy
- PHIL 1330 Introduction to Critical Thinking, or PHIL 2350 Introduction to Logic, or LIST 3310 Reasoning Across the Disciplines
- PHIL 2320 Ethics and Society
- PHIL 4340 Philosophy of Law
- PHIL 4350 Classical Political Theory, or PHIL 4360 Modern Political Theory

Five courses from the following (15 hours)
- PHIL 3310 Ways of Knowing
- PHIL 3315 Philosophy and Film
- PHIL 3320 Modern Philosophy
- PHIL 3325 Philosophy and Fiction
- PHIL 3335 Medical Ethics
- PHIL 3340 Business Ethics
- PHIL 3345 Ancient Philosophy
- PHIL 3350 Eastern Thought
- PHIL 3360 Philosophy of Religion
- PHIL 3370 Existentialism
- PHIL 3380 Ethics Seminar
- PHIL 4310 Science and Values
- PHIL 4313 Apocalypse Now and Then
- PHIL 4320 Contemporary Philosophy
- PHIL 4341 History of Chinese Philosophy
- PHIL 4350 Classical Political Theory, or PHIL 4360 Modern Political Theory (if not taken above)
- PHIL 4280, 4380 Topics in Philosophy
- PHIL 4290, 4390 Independent Study
- PHIL 7310 Current Philosophical Issues

Electives (11 hours)

First Year, School of Law Curriculum (30 hours)

Minor in Philosophy (18 hours)
- PHIL 1310 Introduction to Philosophy
- PHIL 1330 Introduction to Critical Thinking, or PHIL 2350 Introduction to Logic, or LIST 3310 Reasoning Across the Disciplines
- PHIL 2320 Ethics and Society

Three courses (9 hours) of upper-level (3000-4000) electives.

Minor in Philosophy/Religious Studies (21 hours)
- PHIL 1310 Introduction to Philosophy
- RELS 2305 World Religions
- PHIL 1330 Introduction to Critical Thinking, or PHIL 2350 Introduction to Logic, or LIST 3310 Reasoning Across the Disciplines

Twelve hours of upper-level electives (6 from philosophy and 6 from religious studies)

1. See “Core Requirements for Bachelor Degrees” on page 27.
2. See “Second Language Requirement” on page 27.

Liberal Arts

The liberal arts degree program is an interdisciplinary approach to university studies. The major/minor program allows the student to combine aspects of several academic disciplines both within and outside of the College of Arts, Humanities, and Social Sciences (CAHSS).

Major/Minor in Liberal Arts

Core Requirements (44 hours)³

Second Language Proficiency⁴

Required courses:
- LIST 3310 Reasoning Across the Disciplines
- LIST 4310 Liberal Arts Colloquium (to be taken at the end of the student’s course of study)

Three disciplines of study (18 hours in each, 54 hours total):

Two disciplines must be within the CAHSS
- American Humanities
- American Studies
- Anthropology
- Arkansas Studies
- Art History
- Creative Writing
- Dance for the Theater
- Developmental Psychology
- Digital Graphics
- English (Literature or ESL)
- Ethnic Studies
- Film
- French
- Gender Studies
- Geography
- German
- Gerontology
- History
- Industrial Psychology
- International Studies
- Legal Studies
- Linguistics
- Medical Anthropology/Sociology
- Music
- Philosophy
- Political Science
- Psychology
- Religious Studies
- Sociology
- Spanish
- Studio Art
- Technical Theatre
- Theatre Arts
- Writing (technical and nonfiction)

One of the three 18-hour blocks may be taken outside of the College of Arts, Humanities, and Social Sciences. Those possibilities are not included in the list above. Each of the 18-hour concentrations must include the courses required for the minor in the chosen discipline unless an alternate sequence of courses is approved by the liberal arts coordinator. For minors that require more than 18 hours, students should consult their advisor.

3. See “Core Requirements for Bachelor Degrees” on page 27.
Minor in Religious Studies

Most people experience religion from within some particular religious tradition. However, to study religion from the academic standpoint is to adopt the perspective of a detached but empathetic observer. Using the tools and methodologies of the humanities and social sciences, the student of religion seeks to better understand the perspective of religious people, to map and explain the various elements of religious life, and, finally, to evaluate the claims made by religious people and the role of religion in human life.

The minor is of value to students preparing for further study in religious studies or allied fields after graduation, such as graduate school or seminary, and to those who want to understand one of humanity's most basic responses to life.

Courses in Liberal Studies (LIST)

LIST 3310 Reasoning Across the Disciplines
Students will study interdisciplinary processes and concerns that apply to the liberal arts, including reading and thinking critically, making effective arguments, exploring research techniques, and writing effectively. Three credit hours.

LIST 4310 Liberal Arts Colloquium
A capstone course. Students will employ interdisciplinary methodology and critical thinking skills to examine and evaluate an interdisciplinary topic. The development and presentation of an interdisciplinary thesis/project will also be required. Three credit hours.

Courses in Philosophy (PHIL)

PHIL 1110 Introduction to Ethics
Overview of ethical theory and moral reasoning; case-based approach emphasizing ethical issues in business and technology. Same as ISFC 1110. One lecture hour per week. One credit hour.

PHIL 1310 Introduction to Philosophy
Prerequisite: RHET 1311. Survey of basic themes in philosophy. Addresses such fundamental concerns as the nature of morality and beauty, the reasonableness of religious conviction, the nature of persons and the existence of free will, the status of animals and the environment, the relation of mind and body, the structure of a just society, and the nature of art through discussion and analysis of readings. Three credit hours.

PHIL 1320 History of Ideas
Historical critique of ideas that have shaped our society. Study of the development and influence of basic concepts such as legal and moral rights, humanism, the nature of social and personal relationships, the characteristics of the good life, the rise of science and the place of religion, and the ideas of progress, destiny, and freedom. Three credit hours.

PHIL 1330 Introduction to Critical Thinking
An introduction to reasoning skills. Focus on the recognition of informal fallacies, the nature, use, and evaluation of arguments, and the characteristics of inductive and deductive arguments. Three credit hours.

PHIL 1340 Ethics and NCAA Rules
Required for all incoming (first year and transfer) athletes. NCAA requirements concerning amateurism, recruiting, agents, benefits, and eligibility in terms of general ethical considerations, the history of college athletics and the NCAA, and ramifications for the university and the college athlete. Ethical support for NCAA compliance stressed. Three credit hours.

PHIL 2320 Ethics and Society
Prerequisite: RHET 1311. Study of selected texts reflecting a variety of ethical systems from Western and non-Western literary heritages and ethical traditions. Assigned works represent several national ethical literatures, with at least one major ethical text from each of four periods (antiquity, medieval, early modern, and contemporary). Three credit hours.

PHIL 2350 Introduction to Logic
Prerequisite: instructor consent. Introduction to deductive logic including translation of sentences into formal systems, immediate inferences, syllogisms, formal fallacies, proofs of validity, and quantification. Three credit hours.

PHIL 3310 Ways of Knowing
Prerequisite: PHIL 3230 and PHIL 1310 or consent of instructor. Introduction to the field of epistemology. Skeptical and realist positions will be assessed by analyzing internal and external accounts of knowledge (including coherence, foundation, naturalized, and reliabilist theories). The connection between epistemology and artificial intelligence will also be examined. Three credit hours.

PHIL 3315 Philosophy and Film
Prerequisite: introduction to philosophy or consent of instructor. An investigation into the role film plays in our culture as a philosophical medium. Specific topics may include: what is mind, and how is it related to body? Is there a human nature? Is there a gender nature? What challenges are presented by the development of new technologies? Can we know God? Do we have free will? What may a government legitimately do to control crime and violence? How do films affect the stories we tell about ourselves, our pasts, and our futures?

PHIL 3320 Modern Philosophy
Prerequisite: PHIL 3230 and PHIL 1310 or consent of instructor. This course will examine the writings of early modern philosophers (including Descartes, Locke, Berkeley, Hume, and Kant) and their influence on nineteenth century philosophers (including Hegel, Marx, and Kierkegaard). Three credit hours.

PHIL 3325 Philosophy and Fiction
Philosophical analysis of classic and contemporary novels. Addresses both the philosophy of fiction (with reference to modern critical theory) as well as the philosophical presuppositions and arguments in fiction. Three credit hours.

PHIL 3330 Medical Ethics
Analysis of ethical issues in medicine affecting patients, health-care workers, and the public. Materials drawn from medical, legal, philosophical, and psychiatric sources, addressing such issues as euthanasia, abortion, assisted suicide, involuntary commitment, resource distribution, AIDS, and health insurance. Three credit hours.

PHIL 3340 Business Ethics
Prerequisite: one course in philosophy or business or consent of instructor. Ethical theories and their application to business. Addresses the issues of economic justice; corporate and social responsibility; self-regulation and government regulation; environmental responsibility; affirmative action; and ethical issues in management, production, marketing, advertising, investment, and accounting. Three credit hours.

PHIL 3345 Ancient Philosophy
Prerequisite: introductory philosophy class or instructor consent. Philosophical positions of ancient Greek philosophers (Plato, Aristotle, Epicurus, and others) and their influence on medieval philosophers (Augustine, Aquinas, Averroes, and others). Three credit hours.

PHIL 3350 Eastern Thought
[See course description for RELS 3350 Eastern Thought.]

PHIL 3360 Philosophy of Religion
[See course description for RELS 3360 Philosophy of Religion.]

PHIL 3370 Existentialism
Prerequisite: introductory philosophy course or instructor consent. Survey of the existential philosophers of the nineteenth and twentieth centuries including Kierkegaard, Nietzsche, Heidegger, Sartre, Camus, Jaspers, Marcel, and Tillich. Three credit hours.

PHIL 3380 Ethics Seminar
Prerequisite: PHIL 2320 and PHIL 1310 or consent of instructor. Regional experts will be invited to discuss the central theme of the seminar. The theme will be chosen according to the interest, importance, and relevance to the community. Possible topics include environmental ethics, the African-American family, and the war on drugs. Refer to the semester class schedule for current topic. Three credit hours.

PHIL 4310 Science and Values
Prerequisite: PHIL 2320 and PHIL 1310 or consent of instructor. Examination of the methods, presuppositions, and implications of empirical science. Special emphasis will be given to the metaphysical assumptions that ground the scientific enterprise, and the interface between the pursuit of science and the moral interests of society. Three credit hours.

PHIL 4320 Contemporary Philosophy
Prerequisite: introductory philosophy course or instructor consent. Methods and views of the major philosophers of the twentieth century. Readings from writers such as Dewey, Whitehead, Russell, Quine, Wittgenstein, Husserl, Heidegger, Simone de Beauvoir, Foucault, Derrida, and others. Three credit hours.

PHIL 4340 Philosophy of Law
Prerequisite: PHIL 2320 and PHIL 1310 or consent of instructor. Examination of topics and areas of study in jurisprudence such as the justification for coercion and punishment; the nature, moral foundation, and authority of law; liberty and freedom of expression under the law; feminist legal theory; critical race theory and other contemporary challenges. Three credit hours.
**Courses in Religious Studies (RELS)**

**RELS 1320 Myths and the Modern World**
Examines the origin, nature, and importance of myth. Readings will explore the relationship between myth, reason, fiction, religion, and ethics. Three credit hours.

**RELS 2305 World Religions**
Prerequisite: RHET 1311 recommended. Examines the global patterns of contemporary world religions as symbol systems and expressions of discrete, coherent world views. Three credit hours.

**RELS 2320 Old Testament Survey**
The history, literature, and teachings of the Old Testament; selected readings from representative portions of the books of history, the prophets, and other writings. Three credit hours.

**RELS 2330 New Testament Survey**
The history, literature, and teachings of the New Testament; emphasis on the Gospel accounts of the life and teachings of Jesus; development and spread of Christianity as reported in the Acts and the letters of Paul. Three credit hours.

**RELS 3320 Christianity**
Prerequisite: RELS 2305 or consent of instructor. A survey of major developments in the history of Christian thought from its origins in the New Testament through the Protestant Reformation. Three credit hours.

**RELS 3330 Religious Counter cultures**
A cross-cultural survey of sects and cults throughout history, emphasizing contemporary groups in America. Examination of relevant issues concerning cults; the definitions of sect and cult; the relationship between cults and main line religions; brainwashing, deprogramming, government regulation. Same as ANTH 3366. Three credit hours.

**RELS 3336 Islam**
Prerequisite: RELS 2305 or consent of instructor. An examination of the role of Islam as the primary cohesive element in the social, political, and cultural development of the modern Middle East. Comparison and contrast of Western and Middle Eastern perspectives on relevant current issues. Same as HIST 3336. Three credit hours.

**RELS 3338 Religion and Modern South Asia**
The role of religion (Hinduism, Buddhism, Islam, Christianity) in the formulation of South Asian responses to the processes of Anglicization, Westernization, and Modernization. Same as HIST 3338. Three credit hours.

**RELS 3340 Meditation Techniques**
Theoretical framework for understanding the meditation experience, namely, Jung’s depth psychology, yoga psychology, and Buddhist psychology; training in specific meditation techniques of various religious traditions, including Hatha Yoga, Zen, and the Silence, as well as the self-analysis of dreams. Three credit hours. Cross-listed as PSYC 3340.

**PHIL 4350 Classical Political Theory**
[See course description for POLS 4380 Classical Political Theory.]

**PHIL 4360 Modern Political Theory**
[See course description for POLS 4590 Modern Political Theory.]

**PHIL 4280, 4380 Topics in Philosophy**
Contemporary topics in philosophy. Philosophy of art, metaphysics, and race theory are possible topics. Topics and course offering varies on demand. Two or three credit hours.

**PHIL 4290, 4390 Independent Study**
Prerequisites: senior standing, 15 hours of philosophy, consent of instructor. Selective reading and written project on a topic submitted by the student and approved by the instructor before registration. Open only to students with demonstrated ability to write research papers of superior quality in philosophy. Applicants unknown to the instructor should submit academic transcripts and samples of their research papers in philosophy. Two or three credit hours.

**RELS 3350 Eastern Thought**
Prerequisite: RELS 2305 or consent of instructor. Survey of the beliefs, practices, and group structures of the major Eastern religious and social traditions (including Hinduism, Mahayana and Zen Buddhism, Shintoism, and Confucianism). Three credit hours.

**RELS 3360 Philosophy of Religion**
Prerequisite: RELS 2305 or PHIL 1310 or consent of instructor. Major issues in the philosophy of religion including the knowledge of God, the problem of evil, life after death, religious language and experience, and the relationship of faith and reason. Three credit hours.

**RELS 3363 Psychology of Religion**
See PSYC 3363. Three credit hours.

**RELS 3370 Judaism**
Prerequisite: RELS 2305 or consent of instructor. A survey of major developments in the history of Jewish thought from its origins in the Hebrew Bible through the present. Three credit hours.

**RELS 4313 Apocalypse Now...and Then: A History of Apocalyptic Thought and Movements**
See HIST 4313.

**RELS 4315 Religious History of the United States**
See HIST 4315.

**RELS 4321 Religion, Society, and Culture**
Introduction to the role of shamans, witches, diviners, cultic and magic belief systems, function of myth, ritual, religious symbolism, meaning of spirit possession, revitalization, and ancestor worship in tribal, peasant, and modern societies. Same as ANTH 4321. Three credit hours.

**RELS 4180, 4280, 4380 Topics in Religion**
Prerequisite: consent of instructor. Analysis of selected issues in religious studies. Course content will change. For descriptive title of the content, refer to the semester class schedule. One, two, or three credit hours.

**RELS 4290, 4390 Independent Study**
Prerequisites: consent of instructor, see philosophy website for independent study guidelines. Selective reading and a formal written project on a topic submitted by the student and approved by the instructor at a conference in advance of registration. Open only to students with demonstrated ability to write research papers of superior quality in religious studies. Applicants unknown to the instructor should submit academic transcripts and samples of their research papers in religious studies. Two or three credit hours.
The Department of Political Science offers courses for students interested in understanding government and political affairs at the international, national, state, and local level. The mission of the department is to maximize students' capacity to analyze, interpret, and evaluate political events and governmental processes. The department has implemented a program of assessment to measure achievement of these objectives. Students are introduced to the methods of social scientific inquiry and to particularistic knowledge of political problems, institutions, and processes, as well as to more general accounts of the impact of governmental actions on the world, of the forces that shape those actions, and of the behavior of citizens and the political elite. Questions concerning the normative foundations of the state, the legitimate scope of its activity, and the nature of justice are also addressed. Although the major provides a political education in depth for students who have a particular interest in things political, whatever their occupational and professional goals and whatever their talents and interests, it is especially good preparation for careers in teaching, government service, practical politics, and law.

Bachelor of Arts in Political Science

Core Requirements (44 hours)¹

Second Language Proficiency²

Required Courses (6 hours)

POLS 1310 American National Government
POLS 2301 Introduction to Political Science

American Political Institutions and Processes (3 hours)

POLS 3300 American Political Parties
POLS 3305 Elections and Public Opinion
POLS 3310 Policy Process
POLS 3320 The American Presidency
POLS 3325 Legislative Process and Behavior
POLS 4310 Seminar in American National Government
POLS 4320 American Foreign Policy

¹ See “Core Requirements for Bachelor Degrees” on page 27.
² See “Second Language Requirement” on page 27.
³ Nine of these electives must be upper-level.

Minor in Presidential Studies

Required Courses (6 hours)

POLS 3320 The American Presidency
POLS 4360 Selected Topics in Political Science: Presidential Studies

History Requirements (6 hours)

HIST 3352 American Revolution, 1763-1787
HIST 3353 The New Republic: The US, 1787-1848
HIST 3355 American Civil War and Reconstruction, 1848-1876
HIST 3356 The Gilded Age: The US, 1876-1900
HIST 3357 The Age of Reform: The US, 1900-1939
HIST 3358 Recent America: The US, 1939-present
HIST 4385 U.S. Diplomatic History
HIST 4387 Great Decisions in American Foreign Policy (if not taken below as POLS 4387)

Political Science Requirements (6 hours)

POLS 3301 Seminar in Political Science

POLS 3331 Public Administration (if not taken below as PADM 3331)
POLS 4345 The Clinton Presidency
POLS 4350 Constitutional Law: Governmental Powers
POLS 4387 Great Decisions in American Foreign Policy (if not taken above as HIST 4387)

One course from the following (3 hours)

RHET 4306 Writing for Business and Government
PADM 3331 Public Administration (if not taken above as PADM 3331)
HIST 4391 Seminar in United States History
HIST 4395 History Internship
POLS 3348 Internship I
POLS 4348 Internship II
PSYC 4290, 4390 Senior Seminar
SPCH 4313 Seminar: Topics in Communication
JOUR 4384 Topics in Journalism
RTVF 4370 Special Topics: RTVF
RHET 4347 Topics in Nonfiction Writing
RHET 4398, 4399 Senior Writing Project
Secondary Teacher Licensure
See “Secondary Teacher Licensure” on page 45 for details and contact the Department of Political Science as soon as possible for program advising.

Minor in Political Science
A minor in political science requires 18 credit hours, including POLS 1310 American National Government, POLS 2301 Introduction to Political Science, and at least 9 hours of upper-level courses.

Minor in Presidential Studies
Joseph Giacco, coordinator
The Presidential Studies minor enables students to gain a greater understanding of the presidency as an institution and as an actor within several arenas: government and politics, the economy, media and communications, and culture and society.

Courses in Political Science (POLS)

POLS 1310 American National Government
An introduction to the political institutions, processes, and patterns of the national government of the United States, focusing on the Congress, presidency, and courts, and on their interrelationships. Attention is given to suffice and elections, political parties, interest groups, and public opinion. Significant issues and problems of national policy such as civil rights and civil liberties are considered. Three credit hours.

POLS 2301 Introduction to Political Science
Introduction to social science concepts as applied to political analysis. Analysis of individuals, groups, and society, particularly the study of social, economic, and political structures and behavior. Introduction to the discipline of political science as a social science, including enduring questions about politics, nature of political analysis, major theoretical and empirical approaches, and critiques of the discipline. Three credit hours.

POLS 3101 Seminar in Political Science
[See course description for POLS 3101 Seminar in Political Science]

POLS 3201 Seminar in Political Science
[See course description for POLS 3201 Seminar in Political Science]

POLS 3300 American Political Parties
Prerequisite: POLS 1310 or junior standing. The nature, function, and history of political parties in the United States and the process by which the will of the electorate is applied to public problems through suffrage, nominations, campaigns, and elections. Three credit hours.

POLS 3301 Seminar in Political Science
Prerequisite: POLS 1310 or junior standing. Special problems, issues, or trends in the theory and practice of politics and government. May be repeated with a change of subject and permission of department chairperson. One, two, or three credit hours.

POLS 3302 Methods of Political Inquiry
Introduction to basic research methods in empirical political analysis. Research design in political science; data collection techniques; data analysis and hypothesis testing; statistics and computer use for political science. Three credit hours.

POLS 3303 American State and Local Government
Problems of state and local government; the party system in the state; organization, functions, and powers of the legislative, executive, and judicial branches of the state government; organization and operation of county, city, village, and township government in the United States; emphasizes the effect of federalism on American state and local governments. Three credit hours.

POLS 3305 Elections and Public Opinion
Prerequisite: POLS 1310 or junior standing. The roles of elections and public opinion within the democratic system are thoroughly analyzed, with emphasis on factors leading to different electoral behavior and opinions within the public. Three credit hours.

POLS 3310 Policy Process
Prerequisite: POLS 1310 or junior standing. Surveys alternative approaches for analyzing policy making, the political and institutional context affecting the policy process, and selected public policies and decisions. Three credit hours.

POLS 3320 The American Presidency
Prerequisite: POLS 1310 or junior standing. Powers, duties, and responsibilities of our greatest executive officer, centering on historic and contemporary conceptions of the office; the presidency as an administrative institution. Three credit hours.

POLS 3325 Legislative Process and Behavior
Prerequisite: POLS 1310 or junior standing. Legislative politics in the United States Congress and state legislatures; socialization; role of party, constituency, and legislative institutions as they affect legislative behavior and public policy. Three credit hours.

POLS 3331 Public Administration
Prerequisites: POLS 1310 or junior standing. Trends and organization of public administration, fiscal and personnel management, administrative powers, and responsibility. Cross-listed with PADM 3331. Three credit hours.

POLS 3338, 3339 Cooperative Education in Political Science I & II
Prerequisites: declared major in political science; POLS 1310; and at least one upper-level course in political science, basic computer literacy, and consent of the department’s cooperative education coordinator. POLS 3303 is strongly recommended but not required. Cooperative Education in Political Science is designed to give a student majoring in the discipline an educationally applied field work learning experience. A maximum of six hours of Cooperative Education may be taken in the major. Three credit hours.

POLS 3348 Internship I
Prerequisites: at least 45 hours of completed work and permission of the instructor. Public service learning in an applied setting. Provides undergraduate students interested in politics and government with practical governmental experience. Students, through the writing of a primary internship paper and the attendance at periodic intern seminars, synthesize practical and theoretical learning in government, politics, and law. Three credit hours.

POLS 3350 Arkansas Government and Politics
Prerequisite: POLS 1310 or junior standing. A study of contemporary politics and government of Arkansas with a brief introduction to the state’s political history and a concentration on the twentieth-century experience. Topics include elections, the constitution, organization of Arkansas state and local government, and the operation of the executive, legislative, and judicial branches. Three credit hours.

POLS 3360 Comparative Government: Western
Prerequisite: POLS 1310 or junior standing. The structure, powers, and principles of the national governments of the leading European nations, including the former Soviet republics, in contrast with one another and the United States. The course also includes Canadian content. Three credit hours.

POLS 3370 Comparative Politics: Developing Areas
Prerequisite: POLS 1310 or junior standing. An examination of the major themes and practical problems central to third world politics such as development, state-society relations and change. A general focus on cases from Africa, Asia and Latin America will help ground thematic discussions. POLS 3360 is recommended as background. Three credit hours.

POLS 3390 American Political Thought
Prerequisite: POLS 1310 or junior standing. The lives and ideas of leading political thinkers of the United States from the colonial period to the present. Three credit hours.

POLS 4100, 4200, 4300 Independent Study
Prerequisites: senior standing, 15 credit hours of political science, consent of instructor. Advanced study and research. The student should prepare a prospectus before applying for independent study. One, two, or three credit hours.

POLS 4301 Judicial System and Process
A survey of state, local, and federal judicial systems and their interrelationships. Examines judicial structure, functions, and decision-making procedures. Cross-listed with CRJU 4301. Three credit hours.

POLS 4302 Law and Society
An examination of the origins and history of law in society, including the evolving roles of judges, juries, defense attorneys, and prosecutors. Examines the evolution of civil and criminal law, the adversary system, and the concept of justice. Cross-listed with CRJU 4302. Three credit hours.
POLS 4308 Topics in Urban Studies
In-depth analysis of selected urban topics and themes. Course emphasizes multidisciplinary nature of urban issues and various approaches used to characterize, investigate and understand urban phenomena. May be repeated for credit with a change of subject and permission of the department chairperson. Cross-listed as URST 4308. Dual-listed in the UALR Graduate Catalog as 5308.

POLS 4310 Seminar in American National Government
Prerequisite: senior standing. Research seminar dealing with selected phases of politics and government in the United States. 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 will involve a substantial writing project. Dual-listed in the UALR Graduate Catalog as POLS 5310. Three credit hours.

POLS 4315 Capitol Hill Seminar
An introduction to politics and government in Washington, DC politics. Through meetings with Washington decision-makers from the three branches of government, the major governmental linkage institutions and lobbyists, congressional staffers, members of the media, think tanks, and political analysts, the course facilitates understanding of the theoretical and practical worlds of American politics from an insider, Capitol Hill, perspective. Three credit hours.

POLS 4320 American Foreign Policy
Prerequisite: POLS 1310 or junior standing. 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. Dual-listed in the UALR Graduate Catalog as POLS 5320. Three credit hours.

POLS 4330 US-Panamanian Relations: Decisions and Documents
Prerequisites: POLS 1310 or equivalent, junior standing, and/or consent of the instructor. A survey of US-Panamanian relations during the 20th century, in the context of US relations with the hemisphere and its rise to global superpower status. Through in-class and on-line lectures and reading of primary documents and secondary materials, students master the background necessary to conduct research projects based on archival materials. Focus on benchmark decisions made by the US and Panama during the 20th century, including responses to opportunities and crises in Panama, decisions to negotiate or refuse international treaties, and decisions about alternative control regimes for the Panama Canal. Major themes include perceptions of national interests, adaptation to changing international realities, conflict resolution, and bargaining behavior during negotiations. Dual-listed in the UALR Graduate Catalog as POLS 5330. Three credit hours.

POLS 4333 Seminar in State Politics
Research seminar dealing with selected aspects of state politics such as comparative policy making, political culture variations, and problem solving. Dual-listed in the UALR Graduate Catalog as POLS 5333. Three credit hours.

POLS 4340 International Relations
Prerequisite: POLS 1310 or junior standing. Provides a conceptual foundation for understanding and analyzing the international system, states, and actors. Examines economic, political, and military aspects of national security, power, and national interest, and patterns of national decision making. Three credit hours.

POLS 4343 Seminar in Local Politics
Research seminar dealing with selected aspects of local politics such as community power structure, local autonomy, and comparative administration. Dual-listed in the UALR Graduate Catalog as POLS 5343. Three credit hours.

POLS 4345 The Clinton Presidency
Prerequisite: consent of the instructor. 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 skill of the president; relations with the press, political parties and groups; and the legacy of the Clinton presidency. Dual-listed in the UALR Graduate Catalog as POLS 5345. Three credit hours.

POLS 4348 Internship II
Prerequisite: Senior standing and permission of the instructor. A public service learning experience which 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 substantive writing assignment aimed at fully integrating and synthesizing their public service experience. Dual-listed in the UALR Graduate Catalog as POLS 5348. Three credit hours.

POLS 4350 Constitutional Law: Governmental Powers
Prerequisite: POLS 1310 or junior standing. The Supreme Court as a political institution in American democracy. Analysis of leading constitutional decisions exploring judicial review, federalism, separation of powers, regulation of commerce, due process, and equal protection. The dynamics of Supreme Court decision-making. Three credit hours.

POLS 4351 Constitutional Law: Civil Liberties
Prerequisite: POLS 1310 or junior standing. Civil liberties; analysis of leading constitutional decisions focusing on freedom and fundamental rights. Emphasis on religious liberty, freedom of expression, racial equality, privacy, criminal procedures, and the dynamics of Supreme Court decision making. Three credit hours.

POLS 4355 Urban Planning and Land Use
A view of urban planning and land use from critical, analytical urban studies perspective. The course inquires into the meaning of planning for communities and cities. Course uses case studies to explore positive and negative impacts of planning technique and professionalism. Considers historical and modern alternatives to planning and subsequent land use and how urban planning and land use relate to quality of urban life. Dual-listed in the UALR Graduate Catalog as POLS 5355. Three credit hours.

POLS 4356 Urban Policy and Government
Course explores urban policy-making and urban government from a critical, analytical urban studies perspective. Considers historical and modern variations of urban government and intergovernmental relations and how this relates to urban policy making, political will and quality of urban life issues. Dual-listed in the UALR Graduate Catalog as POLS 5356. Three credit hours.

POLS 4360 Selected Topics in Political Science
Prerequisite: senior standing. The seminar provides students the opportunity to bring analytical skills and substantive knowledge gained in prior courses to bear on a selected topic of special importance, and will involve a substantial writing project. Students should inquire at the department for the topic that will be addressed in a given semester. Three credit hours.

POLS 4370 Readings in Political Science
Prerequisite: senior standing. In this readings seminar several outstanding books, including classics and notable current works, are assigned for analysis and discussion. The course is designed to give students an opportunity to consider fundamental themes that perennially concern the discipline: the nature of power, politics, and governance. Three credit hours.

POLS 4375 Politics of the Middle East
The course covers the politics and political dynamics of the Middle East, introducing the student to the main issues and actors (state and non-state) of the contemporary Middle East. The course explores the nature of contemporary politics in the region including the impact of the complex relationships among great power intervention, economics, ethnicity, nationalism, and religion. Three credit hours.

POLS 4380 Classical Political Theory
Prerequisite: POLS 1310 or junior standing. Major political ideas and doctrines of political thinkers from Plato to Montesquieu, with emphasis on the contributions of each to the theory and practice of government. Dual-listed in the UALR Graduate Catalog as POLS 5380. Three credit hours.

POLS 4387 Great Decisions in American Foreign Policy
Prerequisites: POLS 1310, HIS 2311, or junior standing. Examines eight current foreign policy issues. Explores the origins 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. Dual-listed in the UALR Graduate Catalog as POLS 5387. Three credit hours.

POLS 4390 Modern Political Theory
Prerequisite: POLS 1310 or junior standing. A continuation of POLS 4380; from Edmund Burke to the present, with emphasis on the more recent political theories and systems of democracy, communism, and socialism. Dual-listed in the UALR Graduate Catalog as POLS 5390. Three credit hours.

POLS 4397 Social Studies Teaching Applications
A link between social studies content with practical applications for classroom instruction. Content information comes from history, geography, political science, sociology/anthropology, and psychology. Modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. Critical components of each of the disciplines integrated into the content presentations and the demonstrated applications. Team taught. Same as GEOG and HIST 4397. Three credit hours.
Urban Studies
Trent Shaskan, coordinator of Urban Studies Minor
George W. Ittenberg, coordinator of Urban Projects and Design

Urban Studies is an academic field that examines how urban areas work, how cities contribute to civilization, and how people and institutions interact in areas of high population density. The study of urban issues includes urban democracy and citizen participation, local government structure, metropolitan planning, land use and economic development policy, intergovernmental relationships, urban demographics and population movement, urban and social history, geography and spatial form, and physical design.

The Urban Studies minor at UALR is designed to develop the critical thinking skills of students, preparing them for the workplace and graduate school. The minor encourages student internships and service learning opportunities as ways to immediately apply academic learning and critical thinking skills and to gain the practical experience and necessary contacts for the workplace.

The Urban Studies minor is joined to an Urban Design mission that works directly on projects in the areas of community development, small town assistance, and downtown and neighborhood planning. Students are encouraged to participate in these various design projects, incorporating their critical faculties and substantive learning.

Courses in Urban Studies (URST)

URST 3305 Study of the City
Investigation of the city from the vantage of time (ancient to modern) and various academic disciplines, such as politics, sociology, anthropology, and history. Course explores the function of cities, both the changing and constant meaning of cities for humankind, and compares the modern American urban experience with others. Course offers methodological and substantive urban perspectives.

URST 4302 Independent Study
Prerequisite: consent of the instructor. Focuses multidisciplinary backgrounds on the problem of the urban area. Projects reflect interests and career objectives along with departmental objectives. Three credit hours.

URST 4305 Urban Design
Analyzes the evolution of the physical city with particular focus on issues surrounding livability. The planning and urban design factors which have influenced the city’s growth and change through time will also be emphasized.

URST 4308 Topics in Urban Studies
In-depth analysis of selected urban topics and themes. Course emphasizes multidisciplinary nature of urban issues and various approaches used to characterize, investigate and understand urban phenomena. May be repeated for credit with a change of subject and permission of the department chairperson. Cross-listed as POLS 4308. Dual-listed in the UALR Graduate Catalog as 5308.

URST 4355 Urban Planning and Land Use
A view of urban planning and land use from critical, analytical urban studies perspective. The course inquires into the meaning of planning for communities and cities. Course uses case studies to explore positive and negative impacts of planning technique and professionalism. Considers historical and modern alternatives to planning and subsequent land use and how urban planning and land use relate to quality of urban life. Cross-listed as POLS 4355. Dual-listed in the UALR Graduate Catalog as 5355.

URST 4356 Urban Policy and Government
Course explores urban policy-making and urban government from a critical, analytical urban studies perspective. Considers historical and modern variations of urban government and intergovernmental relations and how this relates to urban policy making, political will and quality of urban life issues. Cross-listed as POLS 4356. Dual-listed in the UALR Graduate Catalog as 5356.

Minor in Urban Studies

Required courses in Urban Studies: (3 hours)
URST 3305 Study of the City

Three courses (9 hours) from the following
URST 4305 Urban Design
URST/POLS 4355 Urban Planning and Land Use
URST/POLS 4356 Urban Policy and Government
URST/POLS 4308 Topics in Urban Studies

Two courses (6 hours) from the following (with coordinator’s approval)
POLS 3348 Internship I or POLS 4348 Internship II
URST 4302 Independent Study
POLS 3350 Arkansas Government and Politics
POLS 4343 Seminar in Local Politics
HIST 4359 American Urban History
PADM 3331 Public Administration
GEOG 3320 Urban Geography
SOCI 4332 Population Analysis
PSYC 3308 Urban Environmental Psychology
DEPARTMENT OF PSYCHOLOGY

SH 602
569-3171
569-3047 (fax)
Chairperson:
Blevins-Knabe, Belinda L., professor
Professors:
Musun, Linda
Poling, Tommy H.
Webb, Roger A.
Associate Professors:
Faucett, John M.
Hines, Robert J.
Holland, Daniel C.
Hummel, Carl F. Jr.
Mastin, David F.
Moore, Bruce D.
Sherwin, Elisabeth D.
Assistant Professor:
Corwyn, Robert

The mission of the department is to be excellent in teaching, scholarship, and service. The department applies psychological knowledge, skills, and tools to further human welfare and to produce well-trained students. The Psychology Department continuously assesses the quality of its efforts and uses the data to make improvements in the program.

The department offers courses that serve three principal purposes: to help students understand themselves and others by studying factors influencing human behavior, to introduce students to the essentials of the scientific method as applied to behavioral research, and to provide a background for students intending to do graduate study in psychology or an allied field.

Major in Psychology

Minimum requirements for a psychology major are 31 hours of psychology as specified below with a grade of C or greater in all PSYC courses counted for the major.

<table>
<thead>
<tr>
<th>Bachelor of Arts in Psychology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements (44 hours)²</td>
</tr>
<tr>
<td>Second Language Proficiency³</td>
</tr>
<tr>
<td>Required Courses in Psychology (13 hours)</td>
</tr>
<tr>
<td>PSYC 2300 Psychology and the Human Experience</td>
</tr>
<tr>
<td>PSYC 2340 Statistics and Methods I</td>
</tr>
<tr>
<td>PSYC 2341 Statistics and Methods II</td>
</tr>
<tr>
<td>PSYC 3320 Introduction to Applied Psychology</td>
</tr>
<tr>
<td>PSYC 4100 Senior Synthesis</td>
</tr>
<tr>
<td>One course from the following (3 hours)</td>
</tr>
<tr>
<td>PSYC 3360 Abnormal Psychology</td>
</tr>
</tbody>
</table>

[² See "Core Requirements for Bachelor Degrees" on page 27.]
[³ See "Second Language Requirement" on page 27.]

Minors in Psychology

The department offers three minors serving different objectives. Students may not major and minor in psychology. All three minors require 18 hours, including PSYC 2300. For all minors, a maximum of three hours of independent study, internship, or practicum may be applied to the required hours. Students should be advised that it may take two years to complete a minor since some courses may be offered only every other year.

One choice would be a minor in industrial psychology, for which the remaining 15 hours would be chosen from the following seven courses: applied psychology, personnel psychology, industrial psychology, organizational psychology, human factors psychology, psychology of consumer behavior, psychological tests, and the statistics course (PSYC 2340). A student may substitute a business or mathematics statistics course for psychological statistics. The minor in industrial psychology is designed to complement a variety of majors, including management, marketing, advertising/public relations, communication, education, sociology, and political science.

A second choice is a minor in developmental psychology, for which the remaining 15 hours would consist of the following courses: developmental, social and personality development, infancy, psychological disorders of childhood, and adolescence.

Finally, a minor in general psychology would involve an additional 15 hours selected from any upper-level courses. It is flexible enough to permit the student to structure a program to meet personal needs and wishes.

Psi Chi Chapter

Membership in the UALR Chapter of Psi Chi, the National Honor Society in Psychology, is available to students interested in psychology as a topic or as a profession, and who meet the membership requirements. Requirements are:

1. Declaring a major or minor in psychology, or completing three semesters of college courses and nine semester hours of psychology courses
2. Having an overall cumulative GPA of 3.00, a minimum GPA of 3.00 in psychology courses, and a rank in the upper 35 percent of the class (undergraduates)
Courses in Psychology (PSYC)

PSYC 2300 Psychology and the Human Experience
Recommended prerequisite: RHET 1311. Focuses on development of the individual in the context of physical and social environments. Topics include the scientific method and its application to the study of the individual, the relationship between brain and behavior, social and personality development, theories of motivation, maladaptive behavior, social cognition and interaction, and the effects of socialization in different groups. Students learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Three credit hours.

PSYC 2310 General Psychological Statistics
Prerequisite: MATH 1302 or 1315 or equivalent. A general survey of statistical methods in psychology, including descriptive and inferential techniques. Emphasis on application and interpretation of the statistical procedures. Course does not fulfill requirement for psychology majors, or count toward the minimum of 31 hours of psychology courses for majors. May be useful in preparation for required statistics courses. Accepted by some majors. See program advisor for information. Three credit hours.

PSYC 2340 Statistics and Methods I
Prerequisite: MATH 1302 or 1315 or equivalent. A study of descriptive research techniques. Emphasis on design and statistical analysis of descriptive experimental procedures. Topics include central tendency and dispersion, probability theory, frequency distributions, percentiles, correlation and regression. Three credit hours.

PSYC 2341 Statistics and Methods II
Prerequisite: PSYC 2340. A study of inferential research techniques, with an emphasis on the design and statistical analysis of controlled experimental procedures. Topics include sampling procedures and distributions, hypothesis testing, within and between subjects designs, tests of the difference between two means, and one-way and factorial analyses of variance. Three credit hours.

PSYC 3305 Sensation-Perception
Prerequisite: PSYC 2303. Study of the perception external events and sensory processes underlying that perception. Three credit hours.

PSYC 3308 Urban Environmental Psychology
Prerequisite: PSYC 2300. Study of the effects of physical environments on individuals. Topics include individual perceptions of local environments, pollution, and energy costs versus crowding; unique environments, such as wilderness, museums, and zoos; and the design of more livable homes. Three credit hours.

PSYC 3310 Motivation and Emotion
Prerequisite: PSYC 2300. Detailed coverage of important forms of human motivation and curricular treatments of emotions. Three credit hours.

PSYC 3320 Introduction to Applied Psychology
Prerequisite: PSYC 2300. An introduction to the application of psychology to a variety of problems concerning mental and physical health, communication, motivation, the use of tests and other psychological techniques in industry and government, social engineering, environmental issues, and the legal system. Also covers careers in psychology, their educational requirements, and career planning. Three credit hours.

PSYC 3330 Health Psychology
Prerequisite: PSYC 2300. A study of the inter-relationship between psychology and physical health. It covers the research regarding the mind-body connection, the causes of stress and how stress impacts health, behavioral contributions to an individual’s or community’s health status, and the ways in which health is being re-conceptualized. Three credit hours.

PSYC 3334 Meditation Techniques
Theoretical framework for understanding the meditation experience, namely, Jung’s depth psychology, yoga psychology, and Buddhist psychology; training in specific meditation techniques of various religious traditions, including Hatha Yoga, Zen, and the Silence, as well as the self-analysis of dreams. Three credit hours. Cr/Gr listed as RELS 3340.

PSYC 3350 Social Psychology
Prerequisite: PSYC 2300. An introduction to theories, research, and problems regarding interrelationships of social structure, interpersonal interaction, and behavior of individuals. Topics include human aggression, prejudice, attraction, persuasion, intergroup relations, and conformity. Three credit hours.

PSYC 3356 Developmental Psychology
Prerequisite: PSYC 2300. Development of the individual from conception through adolescence. Topics include prenatal, intellectual, emotional, social, and personality development. Three credit hours.

PSYC 3357 Infancy
Prerequisite: PSYC 2300, 3356, or consent of the instructor. Theory and research on the psychological development of infants. Topics include sensory and perceptual development, intellectual development, social and emotional development, and physical development during the first two years of life. Three credit hours.

PSYC 3360 Abnormal Psychology
Prerequisite: PSYC 2300. The causes, symptoms, and treatment of abnormalities in human behavior. Three credit hours.

PSYC 3363 Psychology of Religion
Prerequisite: PSYC 2300 or consent of instructor. Various interpretations of religious experience in terms of modern Western psychology and their use in religious counseling. Varieties of religious experiences, psychological interpretations of religious experiences, religion and stages of human development, and techniques of religious counseling. Three credit hours.

PSYC 3365 Fundamentals of Psychosexual Behavior
Prerequisite: PSYC 2300. The emotional, attitudinal, and developmental parameters of human sexual motivation and behavior; masculinity-femininity; sexual deviation; and prevalent sexual behaviors. Three credit hours.

PSYC 3366 Psychology of Women
Prerequisite: Psychology 2300. The study of the psychology of women, emphasizing the different views of women in our society, the bases of these views, and their implications for men and women. Three credit hours.

PSYC 3368 Psychology Cooperative Education
Prerequisites: completed 30 semester hours with a 2.50 GPA overall, PSYC 2300, six upper-level hours in psychology and consent of the psychology department coordinator and the director of cooperative education. Transfer students must have completed one semester in residence. Prerequisite or corequisite: PSYC 2340 or 2350. Designed to complement and extend the classroom learning experience through the application of psychology-based concepts, skills, and technology in a professional work environment. PSYC 3368 normally requires 200 hours per semester with the employer. Number of work hours, activities, and responsibilities depend on the nature of the work and must be specified in a written agreement coordinated with the course instructor and the Office of Cooperative Education. Grading is based on the criteria of the written agreement and is the responsibility of the instructor. Three credit hours.

PSYC 3369, 3469 Internship
Prerequisites: junior standing, consent of instructor. Provides practical experience in a professional urban setting. Students work in a business, government agency, state mental health institution, or similar location giving opportunities to apply their academic background to develop applied skills. Three or four credit hours.

PSYC 3370 Industrial Psychology
Prerequisite: PSYC 2300. A survey of the field of industrial psychology. Application of psychological principles to prediction, performance criteria, job analysis, employee evaluation, training, work environment, management, motivation, and job satisfaction. Recommended for business students and those interested in applied psychology. Three credit hours.

PSYC 3375 Psychology of Consumer Behavior
Prerequisite: PSYC 2300. Psychology of advertising; motivational, perceptual, social, and learning variables influencing consumer choice. Recommended for advertising, marketing, business, and psychology majors. Three credit hours.

PSYC 3380 Cognitive Psychology
Prerequisite: PSYC 2300. An introduction to theories and research regarding human information processing. Topics include attention, memory, problem solving, information representation, and individual differences in cognitive ability. Three credit hours.

PSYC 4100 Senior Synthesis
Prerequisite: senior standing and 18 hours in psychology, or consent of instructor. Capstone course, applying knowledge and skills from previous psychology courses. One credit hour.

PSYC 4300 Drugs and Behavior
Prerequisite: PSYC 2300, senior standing, or consent of instructor. An analysis of the effects of drug administration on ongoing behavior and learning. Emphasis on drugs of clinical application and usage. Dual-listed in the UALR Graduate Catalog as PSYC 5300. Three credit hours.

PSYC 4301 Drug Abuse
Prerequisite: PSYC 2300. A study of drug abuse and addiction with an emphasis on pharmacological, psychological, and behavioral aspects of abused drugs. There is also an emphasis on the various treatments used in the attempt to control these addictions. Three credit hours.

PSYC 4310 Counseling Psychology
Prerequisite: PSYC 2300, senior standing, or consent of the instructor. A survey of a major field of counseling and its philosophy, with emphasis on the counseling relationship. Educational, vocational, industrial, and personal counseling are covered. Dual-listed in the UALR Graduate Catalog as PSYC 5310. Three credit hours.

PSYC 4320 Physiological Psychology
Prerequisite: PSYC 2300. Principal neuroanatomical structures, with emphasis on their behavioral correlates. Three credit hours.

PSYC 4221, 4321 Independent Study
Prerequisite: senior standing psychology majors, consent of the professor. Readings and research in various areas of psychology. Two or three credit hours.
PSYC 4325 Personnel Psychology
Prerequisites: PSYC 2300, three hours of statistics. Analysis of industrial psychology in terms of personnel work. Topics include predictors and related issues, criteria and related issues, statistical analysis for selection and placement, testing, interviews and other non-test procedures, personnel development, and attitude measurement. Dual-listed in the UALR Graduate Catalog as PSYC 5325. Three credit hours.

PSYC 4330 Learning and Memory
Prerequisite: PSYC 2300. Fundamental principles of conditioning and learning. Topics include traditional and modern approaches to reinforcement, punishment, generalization, discrimination, constraints on learning, and applications of learning principles. Dual-listed in the UALR Graduate Catalog as PSYC 5330. Three credit hours.

PSYC 4335 Personality and Social Development
Prerequisite: PSYC 2300. Recommended: PSYC 3356. Examines the interaction between developing children and the social environment and the implications for adult personality using an Eriksonian stage model. Constitutional predispositions, parental care giving, modeling, peer interaction, and social institutions considered. Three credit hours.

PSYC 4336 Cognitive Development
Prerequisite: PSYC 2300, 3336, and senior standing or consent of the instructor. An introduction to the theories and research on the development of thinking in infants, children, and adolescents. Dual-listed in the UALR Graduate Catalog as PSYC 5336. Three credit hours.

PSYC 4340 Shaping of Human Behavior
Prerequisite: PSYC 2300, and senior standing or consent of the instructor. A study of the application of principles of learning and conditioning to the shaping of the behavior of people in a variety of settings. Ethical issues in changing human behavior. Dual-listed in the UALR Graduate Catalog as PSYC 5340. Three credit hours.

PSYC 4345 History of Psychology
Prerequisite: PSYC 2300. An examination of concepts, methods, and systems that have contributed to the development of modern psychology. Provides excellent preparation for the Advanced Psychology GRE. Three credit hours.

PSYC 4355 Psychology of Personal Adjustment
Prerequisite: PSYC 2355. A study of the healthy personality, emphasizing characteristics, development, and promotion of mental health. Three credit hours.

PSYC 4363 Organizational Psychology
Prerequisite: PSYC 2300, and senior standing or consent of the instructor. An analysis of the interplay of individuals and the organizations for which they work. Topics include job satisfaction, motivation, morale, leadership, group dynamics, conflict, communication, union-management relations, and organizational growth and development. Dual-listed in the UALR Graduate Catalog as PSYC 5363. Three credit hours.

PSYC 4365 Psychological Disorders of Childhood
Prerequisite: PSYC 2300, and senior standing or consent of instructor. A study of the nature, causes, and treatment of disturbed behavior in children and their families. Topics include childhood psychoses, attention deficit disorder, autism, depression, behavior problems, and the abused child. Dual-listed in the UALR Graduate Catalog as PSYC 5365. Three credit hours.

PSYC 4370 Psychology of Personality
Prerequisite: PSYC 2300 and PSYC 3360. A critical survey of modern approaches to the organization and development of personality, with extensive reading to integrate experimental, clinical, biographical, and cultural evidence. Three credit hours.

PSYC 4380 Human Factors Psychology
Prerequisite: PSYC 2300. An analysis of relevant information about human behavior for the design of physical objects people use, the methods for their use, and the design of environments in which people live and work. Three credit hours.

PSYC 4385 Psychology and Public Health
Prerequisites: PSYC 2300, and senior standing, or consent of the instructor for undergraduates; graduate standing for graduates. Considers 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. Will explore innovative public health models in which psychological science or applications have been prominent. Dual-listed in the UALR Graduate Catalog as PSYC 5385. Three credit hours.

PSYC 4290, 4390 Senior Seminar
Prerequisite: PSYC 2340 and senior status in psychology major. Topics vary with instructor. Two or three credit hours.

PSYC 4397 Social Studies Teaching Applications
A link between social studies content with practical applications for classroom instruction. Information comes from history, geography, political science, sociology/anthropology, and psychology. Content modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. Critical components of each discipline integrated into the content presentations and the demonstrated applications. Team taught. Three credit hours.

PSYC 4412 Computer Applications in Psychology
Prerequisite: consent of instructor. The basic instrumentation involved in psychological research, with emphasis on the use of programming language in experimental situations and interfacing microcomputers with common laboratory equipment. Two hours lecture, four hours laboratory per week. Four credit hours.

PSYC 4450 Experimental Psychology
Prerequisites: PSYC 2300, 2340. General methodological principles and techniques of psychological experimentation. Students design, conduct, analyze, and report experiments in their areas of interest. Three hours lecture, two hours laboratory. Four credit hours.

PSYC 4460 Psychological Tests: Composition and Interpretation
Prerequisite: PSYC 2300, three hours of college-level statistics, and senior standing. An extensive treatment of reliability and validity, norms, and standardization. The construction and use of common psychological tests are considered. Dual-listed in the UALR Graduate Catalog as PSYC 5460. Four credit hours.

PSYC 4495 Practicum in Psychology
Prerequisites: senior standing, consent of instructor. The student will perform independent laboratory research or assist in the instructional process. Four credit hours.
DEPARTMENT OF RHETORIC & WRITING

The department offers students first-year composition, a variety of specialized courses to help improve writing skills, a major in professional and technical writing, and a master’s degree in professional and technical writing. The department also maintains the University Writing Center, where all students who wish to work on specific writing needs are welcome.

First-Year Composition

The first-year composition sequence consists of RHET 1311 Composition I and RHET 1312 Composition II. These courses fulfill the UALR core curriculum requirements. Students must complete RHET 1311 with a grade of C or greater before enrolling in RHET 1312. Together, these courses help students develop the writing skills needed to pursue a college degree.

In addition, RHET 0310 Composition Fundamentals is offered for students who are not prepared for RHET 1311.

Honors composition: Students with an ACT English score of 27 or greater who have an A or B in high school English are invited to enroll in RHET 1320 Honors Composition. Students who feel they qualify for Honors Composition but who do not receive invitations should contact the Department of Rhetoric and Writing office at (501) 569-3160. RHET 1320 satisfies the core curriculum requirement in written literacy.

Exempting RHET 1311: Students with an ACT English score of 29 or greater are automatically exempted. They may enroll either in RHET 1320 or in RHET 1312 to complete the core curriculum composition requirement.

Testing out of composition: Students who feel they already have the requisite skills of either RHET 1311 or 1312 may attempt to complete these requirements by examination or testing out. For information about test dates, required fees, and test content, students should contact the Office of Testing Services. The tests parallel the contents of RHET 1311 and 1312. A student who successfully tests out of a course will receive no grade but will receive three credit hours toward graduation.

Transfer students: Students transferring 60 or more hours to UALR who have met the first year composition requirement at the college previously attended may be exempted from UALR’s first year composition requirement. The decision to exempt a student is made by the student’s major department chairperson when the student files a degree plan.

Major in Professional and Technical Writing

The Department of Rhetoric and Writing in conjunction with the journalism program offers a major in professional and technical writing that features two different tracks. Both of these tracks lead to a bachelor of arts in professional and technical writing.

Track I, advised by the journalism program, is 30 hours equally distributed between the journalism program and the Department of Rhetoric and Writing. It places equal emphasis upon both disciplines. The specialized techniques of news and feature writing taught in journalism courses share the student’s attention equally with the technical writer’s concern with format and process. Majors in Track I take JOUR 2350, 3320, 3375, 4358, and 4359; RHET 3316, 3317, and three other three-hour courses chosen from upper-level rhetoric and writing courses.

Track II, advised by the Department of Rhetoric and Writing, is 30 hours, most of which are selected from the offerings of the Department of Rhetoric and Writing. This track prepares students for writing in a variety of government, business, and technical situations. The required courses include JOUR 2350, RHET 3301, 3315, 3316, 3317, and 4301. Of the remaining 12 hours of electives to complete the 30 hours required, three hours may be selected from upper-level (3000 and above) journalism program writing courses. A faculty committee assesses this program annually to ensure its high quality and constant improvement.

Minor in Writing

A minor in writing requires 18 hours beyond the core curriculum requirements, selected from the following rhetoric and writing courses.

Courses in First-Year Composition (RHET)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET 0310 Composition Fundamentals</td>
<td>Practice in writing, with an emphasis on developing fluency and on editing. This course does not fulfill the core curriculum requirement and is intended for students who are not ready for RHET 1311. Institutional credit only; final grades are A, B, C, or NC. Three credit hours.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RHET 1311 Composition I</td>
<td>Prerequisite: A minimum ACT English score of 19, a minimum SAT I verbal score of 470, or RHET 0310. Practice in writing, with an emphasis on personal, expressive writing, as well as transactional writing. Students will focus on organizing and revising ideas and writing well organized, thoroughly developed papers that achieve the writer’s purpose, meet the readers' needs, and develop the writer’s voice. Final course grades are A, B, C, or NC. Students must complete this course with a grade of C or greater to take RHET 1312. Three credit hours.</td>
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</table>

The University Writing Center (RHET)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET 1110 Composition Fundamentals Writing Laboratory</td>
<td>Individualized supplemental help for students enrolled in RHET 0310 or 1311. Practice in basic grammar and writing skills. May be used as a refresher course before taking RHET 1311; may be used to prepare for composition test-outs. Graded C/NC. One credit hour.</td>
<td></td>
</tr>
<tr>
<td>RHET 1130 Writing on Computers</td>
<td>A practical course for writers to use the computer in the composing process. Students will learn one word processing program well, integrate it into their individual writing processes, and use other software that supports writing on computers. One credit hour.</td>
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</tr>
</tbody>
</table>

College of Arts, Humanities, & Social Sciences
Courses in Rhetoric and Writing (RHET)

RHET 2312 Advanced Composition
Prerequisite: RHET 1312 or equivalent. A course designed to offer the student advanced practice in composition. Emphasis on developing a sense of audience and purpose, writing in teams, and learning problem-solving strategies. Three credit hours.

RHET 3301 Editing for Usage, Style, and Clarity
Prerequisites: RHET 1311 and 1312 or equivalents. An introductory course that focuses on developing the art of written persuasion. Emphasis on persuasive techniques and their ethical consequences. Three credit hours.

RHET 3315 Persuasive Writing
Prerequisite: completion of RHET 1312 or the equivalent. A theoretical and practical introduction to the art of written persuasion. Emphasis on persuasive techniques and their ethical consequences. Three credit hours.

RHET 3316 Writing for the Workplace
Prerequisite: RHET 1312 or the equivalent. Study and practice of workplace communication required of professionals who write as part of their jobs. Emphasis on the development of the sense of audience and purpose and learning problem-solving strategies. Intensive practice writing workplace documents such as memos, letters, emails, resumes, and reports. Three credit hours.

RHET 3371 Introduction to Nonfiction Writing
Prerequisite: completion of RHET 1312 or the equivalent. Study and practice of nonfiction writing to explore, investigate, and explain ideas, experiences, and perspectives. Emphasis on style, voice, revision, and collaboration. Three credit hours.

RHET 3326 Technical Writing
Prerequisite: RHET 1312 or the equivalent. Intensive instruction in the theory and practice of technical communication. Emphasis on understanding audience, establishing a clear purpose, using technology, acquiring a sense of the profession, and developing strategies for successfully producing individual and collaborative documents. Practice writing genres such as reports, instructions, descriptions of specifications, and proposals. Three credit hours.

RHET 3320 Contemporary Issues in Language and Rhetoric
Prerequisites: RHET 1311 and 1312 or equivalents. A study of contemporary issues in language research from rhetorical and social perspectives.

RHET 4100, 4200 Independent Writing Project
Prerequisite: senior standing, consent of director. On-the-job training for students planning to enter a writing career or teach writing. For assignment, see the director of the University Writing Center in the Department of Rhetoric and Writing. C/N grade only. One or two credit hours.

RHET 4202 Teaching Writing in Secondary Schools
Prerequisite: RHET 1312. A methods course taught by faculty from the Departments of English and Rhetoric and Writing. Topics include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, and learning approaches to teaching literature and writing. Taken in conjunction with ENGL 4202. Dual-listed in the UALR Graduate Catalog as RHET 5202. Two credit hours.

RHET 4191, 4291 Writing Internship
Prerequisites: junior standing, consent of director. On-the-job training for students planning to enter a writing career or teach writing. For assignment, see the director of the University Writing Center in the Department of Rhetoric and Writing. C/N grade only. One or two credit hours.

RHET 4301 Theories of Rhetoric and Writing
Prerequisites: RHET 3315 with a grade of C or greater, or consent of instructor. A study of theories of rhetoric and writing. Dual-listed in the UALR Graduate Catalog as RHET 5301. Three credit hours.

RHET 4304 Technical Style and Practice
Prerequisites: RHET 3316 or RHET 3326 with a grade of C or greater, or consent of instructor. Survey and study of institutional and industrial style manuals. Intensive practice in editing technical, business, government, and scientific reports. Dual-listed in the UALR Graduate Catalog as RHET 5304. Three credit hours.

RHET 4305 Document Design
Prerequisite: RHET 3316 or 3326. 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. Dual-listed in the UALR Graduate Catalog as RHET 5305. Three credit hours.

RHET 4306 Writing for Business and Government
Prerequisite: RHET 3316 or 3326 with a grade of C or greater, or consent of instructor. Theory of and practice in writing for business and government organizations. Topics will include training manuals, job descriptions, policy writing, records, and correspondence. Dual-listed in the UALR Graduate Catalog as RHET 5306. Three credit hours.

RHET 4307 Writing Software Documentation
Prerequisite: RHET 3316 or 3326 with a grade of C or greater, or consent of instructor. 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. Three credit hours.

RHET 4315 Advanced Persuasive Writing
Prerequisite: RHET 3315 with a grade of C or greater, or consent of the instructor. An advanced nonfiction writing class. Study and practice of writing to explore, investigate, and explain. Students will write a variety of professional, scholarly, and popular essays. Dual-listed in the UALR Graduate Catalog as RHET 5315. Three credit hours.

RHET 4317 Advanced Nonfiction Writing
Prerequisite: RHET 3317 with a grade of C or greater, or consent of the instructor. An advanced nonfiction writing class. Study and practice of writing to explore, investigate, and explain. Students will write 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. Three credit hours.

RHET 4331 History of Rhetoric I: Beginnings to 1800
Prerequisites: RHET 3151, RHET 3156 or RHET 3326, and RHET 3317, all with a grade of C or greater, or consent of instructor. A study of major theorists and practitioners of rhetoric from classical times through the eighteenth century. Dual-listed in the UALR Graduate Catalog as RHET 5331. Three credit hours.

RHET 4332 History of Rhetoric II: 1800 to Present
Prerequisite: RHET 4331 with a grade of C or greater. Study of major nineteenth- and twentieth-century theorists. Dual-listed in the UALR Graduate Catalog as RHET 5332. Three credit hours.

RHET 4345 Topics in Persuasive Writing
Prerequisite: RHET 3315 with a grade of C or greater, or consent of the instructor. Theory and practice of persuasion with topics varying each semester. Dual-listed in the UALR Graduate Catalog as RHET 5345. Three credit hours.

RHET 4346 Topics in Technical Communication
Prerequisite: RHET 3316 or RHET 3326 with a grade of C or greater, or consent of the instructor. The theory and practice of technical communication; topics vary each semester. Dual-listed in the UALR Graduate Catalog as RHET 5346. Three credit hours.

RHET 4347 Topics in Nonfiction Writing
Prerequisite: RHET 3317 with a grade of C or greater, or consent of the instructor. Theory and practice of nonfiction writing with topics varying each semester. Dual-listed in the UALR Graduate Catalog as RHET 5347. Three credit hours.

RHET 4371 Writing on the Web
Prerequisite: RHET 3316 or RHET 3326 with a grade of C or greater, or consent of instructor. Ability to compose effective technical writing and/or computer competency. Introduction to basic web design and construction; course emphasizes audience(s), purpose(s), and accessibility issues such as web site navigation, multiple browsers, and ADA compliance. Dual-listed in the UALR Graduate Catalog as RHET 5371. Three credit hours.

RHET 4375 Grant Writing
Prerequisites: RHET 3316 or RHET 3326 with a grade of C or greater, or consent of the instructor. Graduate standing required for 5375. Survey, theory, and practice of grant writing (solicited and non-solicited) and the philanthropic sector. Topics include, but are not limited to: finding and researching a foundation, resources for each stage of the grant writing process, developing a problem statement, creating objectives and goals, creating a budget, and working with foundations. Dual-listed in the UALR Graduate Catalog as RHET 5375. Three credit hours.

RHET 4390 Colloquium in Rhetoric and Writing
Prerequisite: Senior status. Focuses on professional development and synthesizing the major concepts within rhetorical/writing theory.
**RHET 4395, 4396 Cooperative Education**

Prerequisite: RHET 3315, 3316, or 3317; recommendation of the departmental cooperative education coordinator. Designed to complement and extend the classroom learning experience through the application of theoretical concepts in a professional workplace. Exact number of work hours, activities, and responsibilities depend on the work experience and must be specified in a written agreement between the employer and student in coordination with the Office of Cooperative Education. Three credit hours.

**RHET 4398, 4399 Senior Writing Project**

Prerequisites: senior writing major or minor with 12 hours of upper-level courses. Student will complete either a portfolio or a final project written in cooperative arrangement with advisor from both major and minor department. Three credit hours.
The department offers courses and programs designed to teach students to analyze and understand basic socio-cultural processes, statuses, and roles; to this end, we conduct a yearly assessment to determine how well we have achieved these objectives. The department also prepares students for careers and graduate study in sociology, anthropology, gerontology, health services administration, public administration, and social work, contributes to the liberal arts training and knowledge of all undergraduates, and provides intellectual skills for students considering careers in these professions and in business.

**Student Advising**

Students considering a major or minor in the department or who have questions about particular courses are urged to contact the department advisor for sociology, the anthropology coordinator, or the anthropology coordinator for anthropology. Majors in the department will develop a degree plan with the chairperson. As part of the department’s mentoring advising plan, students are encouraged to choose an advisor who will work with them throughout their student careers.

### Bachelor of Arts in Sociology

**Core Requirements (44 hours)**

**Second Language Proficiency**

**Major Core (32 hours)**

- SOCI 2300 Introduction to Sociology
- SOCI 3381 Social Statistics
- SOCI 3181 Statistics Laboratory
- SOCI 3383 Classical Sociological Theory or SOCI 3384 Contemporary Sociological Theory
- SOCI 3385 Research Methods
- SOCI 3185 Research Methods Laboratory
- SOCI 4387 Seminar in Applied Sociology
- 15 upper-level credit hours of SOCI courses approved by the department chairperson.

**Minor in Sociology**

A minor in sociology requires 18 credit hours of sociology, including SOCI 2300 Introduction to Sociology and either SOCI 3383 Classical Sociological Theory or SOCI 3384 Contemporary Sociological Theory.

**Minor in Medical Anthropology/Sociology**

A minor in medical anthropology/sociology requires 18 credit hours including ANTH 1415, ANTH 3378 or SOCI 3373, and 12 hours chosen from the following courses: ANTH 4355, SOCI 3350, 3370, 3376, GER0 4336; ANTH/SOCI 3381/3181 or ANTH 4485 or SOCI 3385; ANTH 4327 or 4380 or SOCI 4328 or 4390.

**Minor in Anthropology**

A minor in anthropology requires 18 credit hours of anthropology, including ANTH 1415 Physical Anthropology and ANTH 2316 Cultural Anthropology.

### Minor in Gerontology

A minor in gerontology requires 18 credit hours of gerontology, including GER0 2380, 4315, 4336, and 4346. GER0 4385 Topics Seminar may be taken twice with different topics, or GER0 4390 Directed Study may serve as one of the requirements. A pre-approved course with aging content in another discipline can be substituted for one of the topics seminars. Consult the gerontology coordinator.

### Bachelor of Arts in Anthropology

**Core Requirements (44 hours)**

**Second Language Proficiency**

**Major Core (16 hours)**

- ANTH 1415 Physical Anthropology
- ANTH 2316 Cultural Anthropology
- ANTH 3313 Archaeology or ANTH 4600 Principles of Archaeological Research or another archaeology course approved by the anthropology coordinator
- ANTH 4382 Anthropological Theory
- ANTH 4316 Linguistic Anthropology or ANTH 3317 Introduction to the Study of Language or another linguistic anthropology course approved by the anthropology coordinator.

**ANTH Electives (13 hours)**

**Senior Seminar**

- ANTH 4395 Senior Seminar in Holism

### Awards

Katherine J. Hardie Award in Anthropology

This award is given to the outstanding graduating senior in anthropology each year. The recipient’s name will be engraved on the Hardie Memorial Plaque displayed in the department office. In addition, the recipient will receive an individual plaque.

Outstanding Graduate Award in Sociology

This award honors the graduating senior sociology major who has the highest grade point average.

### Student Field Work in Anthropology Award

The purpose of this award is to provide financial assistance to students for participation in anthropological field work or field school concurrently with their studies in pursuit or enrichment of a degree in Anthropology at the University of Arkansas at Little Rock. Expenses covered by this award may include, but are not limited to, tuition and related travel expenses.

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1. See "Core Requirements for Bachelor Degrees" on page 27.
3. ANTH 3381, 3181, and 4485 are strongly recommended.
Libbet Crandon Malamud Memorial Scholarship

Awarded to a UALR junior or senior with a minor in Gender Studies and with plans to pursue graduate education in the field of gender or women’s studies. Must have a 3.0 GPA.

Beth and Earl Richard Endowed Scholarship

This scholarship is awarded to a full or part-time UALR student major in sociology/anthropology. Selection is based on academic accomplishment with financial need as a secondary consideration.

Student Organizations

The department seeks to promote a sense of collegiality among students. This is reflected in the student-governed Sociology and Anthropology Club. Students new to the department should check with the chairperson for meeting times and activities. In addition, the honors sociology organization, Alpha Kappa Delta, provides majors with a 3.00 grade point average or above access to professional and social activities.

Field Experience

Field experience opportunities are available and highly recommended for all majors. Placements are offered in nearly 50 public and private agencies and organizations throughout central Arkansas. A list of current opportunities is available in the department office.

Prerequisites

The department requires that prerequisites be met for all classes. Students wishing to enroll in a course without the specified prerequisite courses must petition the department for permission to enroll.

Courses in Anthropology (ANTH)

ANTH 1300 Introduction to Anthropology
An exploration of human diversity and the four subfields of anthropology: physical anthropology, cultural anthropology, archaeology, and linguistic anthropology. Three credit hours.

ANTH 1415 Physical Anthropology
A hands-on examination of the study of past and present human and nonhuman primates as biological organisms. Topics include human genetics, variation and osteology, nonhuman primate taxonomy and behavior, forensic anthropology and the human fossil record. Four credit hours.

ANTH 2301 World Cultures
See INTS 2301.

ANTH 2310 World Regions
World regional patterns of population, natural resources, and economic activities with reference to the nature of regions and their characteristics. Regional patterns of Europe, North America, Latin America, Africa, and East and South Asia. Three credit hours.

ANTH 2316 Cultural Anthropology
Prerequisite: RHET 1311 recommended. Examines the concept of culture, cultural processes, and anthropological theories. Topics include subsistence strategies, politics, religion, gender, ethnicity, economics, marriage, stratification, and socialization. Case studies from both small-scale and large-scale societies. Required for majors. Three credit hours.

ANTH 3181 Statistics Laboratory
See SOCI 3181.

ANTH 3312 North American Indians
Prerequisite: ANTH 2316. A study of Indian cultures from the Arctic to northern Mexico from immediately after European contact to the present. Three credit hours.

ANTH 3313 Archaeology
Examination of the archaeological record from the Paleolithic to the Neolithic and the emergence of civilization in both the Old and New Worlds. Required for majors. Three credit hours.

ANTH 3314 Culture and Personality
Prerequisite: ANTH 2316. Comparative study of behavior and socialization in selected cultures; the influence of early socialization on later attitudes and corresponding behavior associated with puberty, reproduction, and death. A cross-cultural analysis of the result of cultural transmission. Three credit hours.

ANTH 3316 Japanese Culture and Society
Prerequisite: ANTH 2316 or SOCI 2300. The anthropological and sociological study of Japanese culture and society; covers Japanese history, major social institutions, and aspects of culture which are unique to Japan. Three credit hours.

ANTH 3317 Introduction to the Study of Language
See ENGL 3313.

ANTH 3318 Sexuality, Society, and Culture
This course provides a social scientific examination of the nature of sexuality cross-culturally as well as in Western society. Examines sexuality in a broader socio-cultural context and cultural construction used from prehistoric to post-modern eras as a form of reproduction and a means for deep expression of intimacy with others and as a device for the domination and exploitation of people of various social categories. Three credit hours.

ANTH 3319 Cultures of the Middle East
The anthropological study of Middle Eastern culture and society; covers the political conflicts and cultural adaptations in the region. The course also focuses on ethnic differentiation, and the influence of Islam upon all the cultures and peoples of the Middle East. Three credit hours.

ANTH 3333 Women in a Changing Society
See SOCI 3333.

ANTH 3340 Experiences of Black Americans
See SOCI 3340.

ANTH 3365 Aging and Culture
Prerequisites: ANTH 2316, GERO 1300, SOCI 2300, or consent of instructor. A cross-cultural perspective of the psychological and sociological dimensions associated with aging and the aged; demographic and cultural examination of older people in traditional and industrial societies. Three credit hours.

ANTH 3366 Religious Countercultures
See RELS 3330.

ANTH 3378 Medical Anthropology
Prerequisite: ANTH 1315 or 2316. Comparison of non-Western and Western medical systems, definitions of health and disease, kinds of treatment, and varieties of cures; examination of the problem of how to adapt Western medicine to the needs of diverse cultural and ethnic groups. Three credit hours.

ANTH 3381 Social Statistics
Prerequisite: MATH 1201 or equivalent. Basic statistical techniques and their corresponding theoretical premises, which are often used in statistical reasoning in sociology. Qualitative variables, characteristics of attributes, measures of their variation, correlation, and tests of significance are stressed. Three credit hours.

ANTH 3383 Human Paleontology
Prerequisite: consent of instructor. Study of the fossil evidence for human evolution and the scientific principles that apply to that study; interpretation of morphological patterns in a functional and adaptive framework; interaction of cultural and biological aspects of hominin development. Three credit hours.

ANTH 3388 Kinship and Descent
Prerequisite: ANTH 2316. Systematic treatment of marriage, descent, and alliances on a cross-cultural basis. Examination of social behavior and terminologies related to kinship systems drawn from traditional and modern societies. Three credit hours.

ANTH 4310 Urban Anthropology
Prerequisite: ANTH 2316. A survey of urbanization throughout the world, with emphasis on urban adaptation of rural migrants and the phenomenon of urbanization in emerging nations. Three credit hours.

ANTH 4316 Linguistic Anthropology
Introduction to the subfield of linguistic anthropology. Examines the impact of linguistic structure on culture, socioeconomic factors in linguistic variation, intercultural and intracultural verbal and nonverbal communication. Also examines the theories and methods of descriptive anthropological linguistics applied to non Indo-European languages and introduces the student to structural linguistic analysis. Required for majors. Three credit hours.

ANTH 4320 Sociocultural Change
Prerequisite: ANTH 2316. 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. Three credit hours.

ANTH 4321 Religion, Society, and Culture
Introduction to the role of shamans, witches, diviners, cultic and magic belief systems, function of myth, ritual, religious symbolism, meaning of spirit possession, revitalization, and ancestor worship in tribal, peasant, and modern societies. Three credit hours.

ANTH 4325 Egyptology
This course will survey the archaeology of Egyptian civilization, from the earliest settlement of the Nile River Valley through the conquest of Alexander the Great and his successors. The course will also consider the origins of the field of Egyptology as well as a number of key archaeological sites representing the lives of the elite as well as the ordinary citizens of the Nile River Valley. Three credit hours.

ANTH 4327 Anthropology Field Experience
Practical experience consisting of at least 90 hours of supervised work in a private or public organization. The objective is for students to apply theoretical orientations and anthropological skills in a work situation. Three credit hours.
SOCI 2301 World Cultures
Population growth; description of population dynamics; analysis of economic, social, political, and ecological implications of population growth or decrease. Three credit hours.

ANTH 4340 Applied Anthropology
Prerequisite: 15 hours of anthropology or consent of instructor. Selected topics concerning the contribution of anthropology to social services and social planning, especially in the fields of education, health care, law enforcement, and therapeutic settings. Three credit hours.

ANTH 4355 Forensic Anthropology
Prerequisite: ANTH 1315 or consent of instructor. Forensic anthropology applied to knowledge of human variation to legal matters. The primary emphasis in this course will be on the human skeletal variation. The theoretical basis of sex determination, age estimation and ethnic origin classification based upon skeletal characteristics will be examined. Other issues such as fire death scene investigation, interval since death, and forensic archaeology also will be addressed. This course will be offered once a year. Dual-listed in the UALR Graduate Catalog as ANTH 5355. Three credit hours.

ANTH 4155 Forensic Anthropology Laboratory
Corequisite: ANTH 4355 or prerequisite: ANTH 4355. Emphasizes hands-on experience in using anthropometric, morphological and statistical techniques employed in age and stature estimation as well as sex and race determination. Laboratory exercises also include forensic archaeology, treatment and proper handling of forensic anthropology evidence, and how to write a forensic anthropology report. Dual-listed in the UALR Graduate Catalog as ANTH 5155. One credit hour.

ANTH 4180, 4280, 4380 Independent Study
Prerequisites: ANTH 1315 or 2316, junior or senior standing, consent of chairperson. One, two, or three credit hours.

ANTH 4382 Anthropological Theory
Prerequisite: ANTH 1315 or 2316. Examines the range of theories used to describe and explain variability in sociocultural phenomena. Explores the organization of particular theories as well as issues that separate divergent theories. Major theoretical orientations to be explored include evolutionism, Marxism, Freudianism, structuralism, structural-functionality, ethnoscience, diffusionism, historical particularism, cultural ecology, sociobiology, and cultural materialism. Required for majors. Three credit hours.

Courses in Gerontology (GERO)

GERO 2300 Introduction to Aging and the Elderly
Prerequisites: RHET 1311 and 1312 or equivalents. SOCI 2300 or PSYC 2300 recommended. An overview of the aged as they relate to their social environment, with emphasis on the biological, psychological, and sociological aspects of aging. Three credit hours.

GERO 4315 Interdisciplinary Health Care of the Elderly
Designed to increase clinical knowledge, skills, and attitudes of students in the health professions and other fields related to health promotion and maintenance for the elderly. In-depth exploration of the multiple factors associated with the physiologic process of aging, psychosocial developmental tasks, and typical environments of aged persons. Dual-listed in the UALR Graduate Catalog as GERO 5315. Three credit hours.

GERO 4336 The Social Aspects of Death and Dying
An exploration of the subject of dying and death in contemporary society. Emphasis is on the psychological and social correlates of death. The dynamics of the grief process and issues of ethics of life support are explored. Dual-listed in the UALR Graduate Catalog as GERO 5336. Three credit hours.

Courses in Sociology (SOCI)

SOCI 2300 Introduction to Sociology
Recommended: RHET 1311. Introduction to sociological concepts. Analysis of society, particularly the study of human organization. An overview of the theories and methods utilized in the discipline is provided and will be used as a framework for critical analysis. Students will learn to investigate group and societal connections in major social institutions-religion, family, politics, economics, education. Three credit hours.

SOCI 2301 World Cultures
See INTS 2301.

SOCI 3181 Statistics Laboratory
Corequisite: SOCI 3381. A data analysis laboratory emphasizing calculators and computer use in statistics. Computer use will emphasize the SPSS package. One hour laboratory per week. One credit hour.

SOCI 3185 Research Methods Laboratory
Prerequisites: SOCI 2300, 3181, 3381, 3383 or 3384. Corequisite: SOCI 3385. Selected skills and techniques in questionnaire construction, data coding, computer use, survey research, and sampling designs. One hour laboratory per week. One credit hour.

SOCI 3300 Sociology of Sports
An overview of sports in the contemporary United States; covers the athletes, the spectators (on site, television, and radio), the therapeutic functions for individuals, and the impact of sports on other institutions in society. Explores the commercialization of sports and its effects on other economic activities. Three credit hours.
SOCI 3316 Japanese Culture and Society
Prerequisite: ANTH 2316 or SOCI 2300. The anthropological and sociological study of Japanese culture and society; covers Japanese history, major social institutions, and aspects of culture that are unique to Japan. Three credit hours.

SOCI 3318 Sexuality, Society, and Culture
See ANTH 3318.

SOCI 3330 Racial and Minority Groups
Prerequisite: SOCI 2300. Analysis of social processes in a pluralistic society, with emphasis on the cultural contributions and ethos of the different ethnic groups. Three credit hours.

SOCI 3333 Women in a Changing Society
Prerequisite: SOCI 2300. An analysis of the socialization of women for their ascribed roles, with emphasis on the molding forces of culture and the changes taking place in women’s roles in contemporary, US, and other societies. Three credit hours.

SOCI 3334 Social Problems
Prerequisite: SOCI 2300. Application of sociological principles to the study of social problems, such as juvenile delinquency, sex-based inequality, educational systems, ethnic groups, ethnic group conflict, crime, industrial conflict and unemployment, overpopulation, and the maintenance of a free society. Three credit hours.

SOCI 3335 Sociology of Deviant Behavior
Prerequisite: SOCI 2300. A survey of deviant behavior in modern society. Emphasis on the theories and causes of deviant behavior, including societal reactions and deviant action and reaction in the contemporary United States. Emphasis on the various theoretical orientations used in sociology today. Three credit hours.

SOCI 3336 Criminology
Prerequisite: SOCI 2300. The nature of criminal deviation, theories of causations, processes of criminal justice, penal and correctional methods and institutions. Three credit hours.

SOCI 3337 Juvenile Delinquency
Prerequisite: SOCI 2300. Juvenile delinquent behavior, problems, theory, cause, control, and prevention. Three credit hours.

SOCI 3340 Experiences of Black Americans
Prerequisite: SOCI 2300. The experiences of blacks in America are subdivided into significant periods with corresponding motifs. Attempts will be made to conceptualize the major influences from each motif-period in the struggle of blacks for sociopolitical and economic equality in a dominantly white society. Three credit hours.

SOCI 3341 Urban Sociology
Prerequisite: SOCI 2300. Analysis of elements of change in cities and suburbs in contemporary society. Social problems related to urbanization and urban centers. Three credit hours.

SOCI 3343 Social Stratification
Prerequisite: SOCI 2300. Analysis of selected theories of stratification, various lifestyles, other bases of social differentiation, and their consequences for individuals and society. Three credit hours.

SOCI 3346 Sociology of the Family
Prerequisite: SOCI 2300. The family as a major unifying force for the individual, the community, and the total society, with emphasis on parental and marital dynamics; analysis of the changes associated with the emergence of urban and industrial societies. Three credit hours.

SOCI 3350 Family Violence
A consideration of abuse, neglect, and conflict within the family. Review of basic theories of interpersonal violence and conflict resolution. Focus on abuse of children, siblings, spouses, and elders. Discussion of social policy responses and appropriate interventions. Three credit hours.

SOCI 3370 The Sociology of Mental Health
The cultural, social, and social-psychological aspects of mental health. Examination of issues such as who is normal, how one is declared abnormal, theories of mental health and illness, and various modes of treatment. Three credit hours.

SOCI 3373 Medical Sociology
Prerequisite: SOCI 2300. A study of the social organization and use of health services in United States society. Emphasis on the social factors affecting availability of and access to these services. Three credit hours.

SOCI 3376 Sociology of Health and Illness
Prerequisite: SOCI 2300. Sociological theory and research related to social epidemiology and to the organization of efforts to cope with illness and disease. Three credit hours.

SOCI 3381 Social Statistics
Prerequisite: SOCI 2300. Recommended: MATH 1301 or equivalent. Basic statistical techniques and their corresponding theoretical premises, which are often used in statistical reasoning in sociology. Qualitative variables, characteristics of attributes, measures of their variation, correlation, and tests of significance are stressed. Three credit hours.

SOCI 3383 Classical Sociological Theory
Prerequisite: SOCI 2300. The conceptual and historical framework of classical sociological theories will be considered. Special emphasis will be given to pre-twentieth-century theory and the philosophical underpinnings of sociological theory. Three credit hours.

SOCI 3384 Contemporary Sociological Theory
Prerequisite: SOCI 2300. Introduction to and critical examination of contemporary sociological theory. The course offers an overview of the concepts, methods, and theoretical perspectives employed by contemporary sociologists. Students are encouraged to take this course after completing SOCI 3383. Three credit hours.

SOCI 3385 Research Methods
Prerequisites: SOCI 3181, 2300, 3381, 3383 or 3384. Corequisites: 3185, senior standing. Methods of research in sociology; trends in methodology and use of computers in processing data and presentation of research reports. Three credit hours.

SOCI 3392 Environmental Sociology
Prerequisite: SOCI 2300. The environment viewed from a sociological perspective. The environmental movement and issues, such as the transition to an ecologically sound society, as they relate to the social structure of United States society. Three credit hours.

SOCI 4301 Computer Use: Packaged Programs
Designed to teach the student to access and use various computer packages such as SPSS and SAS. Some understanding of research and statistical techniques may be helpful but is not required. Graduate students select an appropriate analysis from the ISR, Myths and Realities of Aging data, or other appropriate data base, and write up the results of this analysis. Dual-listed in the ULRL Catalog as SOCI 5301. Three credit hours.

SOCI 4320 Sociocultural Change
See ANTH 4320.

SOCI 4321 Religion, Society, and Culture
See ANTH 4321.

SOCI 4328 Sociology Field Experience
Prerequisites: SOCI 2300, senior standing, or consent of chairperson. Practical experience consisting of at least 90 hours of supervised work in a community agency or any other context of sociological interest. The objective is for students to apply theoretical orientations to real world situations and to develop working skills. May be repeated one time. Three credit hours.

SOCI 4330 Political Sociology
Prerequisite: SOCI 2300. The sociological study of the United States political economy. Sociological theories and concepts applied to the analysis of various aspects of political theory and behavior. Three credit hours.

SOCI 4332 Population Analysis
Prerequisite: SOCI 2300. See ANTH 4332.

SOCI 4353 The Sociology of Developing Nations
Prerequisite: SOCI 2300. A study of the socioeconomic characteristics of third world nations with emphasis on the sociocultural values and dynamics relevant to contemporary development programs. Three credit hours.

SOCI 4365 Sociology of Organizations
Prerequisite: SOCI 2300. Examination of a variety of complex organizations in modern society: schools, hospitals, corporations, unions, universities, and government. Organizational structures and processes are analyzed with emphasis on inter-organizational and organization-environment relations. Three credit hours.

SOCI 4387 Seminar in Applied Sociology
Prerequisites: SOCI 2300, 3181, 3381, 3383 or 3384, 3185, 3385, and senior standing. The use of sociological theories and methods to address issues of practical concern to clients; clinical practice, policy analysis, consultation to business and government, and applied social research. Three credit hours.

SOCI 4190, 4290, 4390 Independent Study
Prerequisites: SOCI 2300, 3181, 3381, 3383 or 3384, 3185 or 15 hours in departmental courses, senior standing, or consent of chairperson. Advanced assignments in selected areas. One, two, or three credit hours.

SOCI 4195, 4295, 4395 Senior Seminar
Prerequisites: 15 hours in department courses or consent of the chairperson. Topics vary. One, two, or three credit hours.

SOCI 4397 Social Studies Teaching Applications
Links social studies content with practical applications for classroom instruction. In-depth experience comes in sociology. Geography, political science, sociology/anthropology, and psychology. Modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. Critical components of each of the disciplines will be integrated into the content presentations and the demonstrated applications. Team taught. Three credit hours.

SOCI 4399 Sociology Cooperative Learning Internship
Prerequisite: declared major, 60 hours of course work completed, consent of the department chairperson and director of cooperative education. Placement in an approved setting in sociology. Students will work under the direction of specialists in areas related to sociology. Credit will be awarded based on at least 200 hours during the semester and fulfillment of the contractual obligations agreed to by both UALR and the public/private agency where placement occurs. Three credit hours.

SOCI 4485 Ethnographic Methods
See ANTH 4485.
The vision of the College of Business (COB) is to be a catalyst to advance education and economic development in the State of Arkansas. The mission of the COB is to support and encourage education and economic development through the teaching, research, and service activities of its academic branch and through research, information, training, and services provided by the Institute for Economic Advancement (IEA) and the Arkansas Small Business Development Center (ASBDC). The college continually seeks new opportunities to participate in these development activities.

The primary academic mission of the COB is to provide effective business education to the undergraduate and graduate degree-seeking students in Arkansas and to promote continued learning and career development to the state’s business and professional community. In addition, the faculty will engage in research and professional services that support education and economic development in Arkansas and advance knowledge in the academic disciplines.

Students may pursue programs of study in several fields of specialty within business. The curricula provide a foundation for entry into management, professional practice, and graduate study.

The college is made up of four departments: Accounting, Economics and Finance, Management, and Marketing and Advertising. The bachelor of science degree is awarded in accounting. Other majors are awarded the bachelor of business administration degree. Requirements for degree programs are listed in the departmental sections of this catalog.

Students in the college select a major from one of the programs. A separate minor is not required. The business courses in the pre-business block and the professional business core serve as the minor for purposes of graduation grade point requirements. All departments in the college offer minors for students whose major field is in another college. Minor requirements are listed in the departmental sections of this chapter.

All students in the college must complete the University core curriculum requirements. In addition, business students complete the pre-business block of courses and the professional business core courses. A group of restricted and/or free electives, also required, varies by major. See the departmental sections for course requirements for each major.

At the graduate level, the college offers the master of business administration degree and the master of science degree in management information systems. See the UALR Graduate Catalog for information about these programs.

The programs of the COB are accredited by the International Association for Management Education (AACSB). The COB Admission Requirements

To be accepted into any program in the COB, the student must have completed MATH 1302 College Algebra and RHET 1312 Composition II, with a grades of C or greater, and have a minimum of 2.25 overall GPA (at UALR or transferring school) or 2.25 overall GPA on the most recently completed 15 hours at UALR. The GPA on the most recent 15 hours will be calculated on all hours attempted during the semester(s) in which the 15-hour requirement is met.

COB Upper-Level Credit Policies

Credit for an upper-level business course is not granted if students complete such courses before accumulating 54 semester credit hours.

Credit is not granted toward a degree for any business course taken without the prerequisites stated in this catalog.

Students may be administratively withdrawn from courses for which they are enrolled without the prerequisites.

Transfer of Credits

In general, credits earned with a grade of C or greater at other appropriately accredited institutions may be transferred for credit toward majors and minors offered by the college, unless otherwise noted within departmental sections.

Credits for upper-level business courses completed at schools not accredited by the AACSB are withheld pending review and validation by the department offering the course(s).

Credits earned at community colleges in business courses offered by UALR at the upper-level are not transferable toward a business degree. Students must complete at UALR at least 50 percent of the major department degree requirements and at least 50 percent of all COB courses required for a business degree.

Transfer students should report to the appropriate department chairperson prior to their first registration.

Concurrent and Transient Enrollment

The general policy is that students seeking UALR business degrees are expected to meet COB degree requirements with courses taken at UALR. Under exceptional circumstances a student may be permitted to take a course at another institution. Written permission to take a course at another institution must be obtained in advance from the major. The major may be obtained from the Office of Records and Registration.
Student Advisement and Information

The COB offers a comprehensive program of student advisement intended to help students transfer, register, and meet degree requirements. Students in University College who intend to major in a business field are advised by the department in which they intend to declare a major. Students accepted into a major in the college are advised by the faculty of the major department. Students accepted into the international business program are advised by the international business program coordinator.

Preparation for Secondary Education with Business Emphasis

Students preparing for careers in secondary education with an emphasis in business education should complete one of the majors offered by the COB before entering the master of secondary education (MEd) program with an emphasis in business education. Business courses required for licensure are offered by the COB. Students should consult the Department of Teacher Education in the College of Education regarding licensure requirements.

Business Studies Options for Non-business Majors

The College of Business offers options in business studies for students with majors in other colleges. These are:

- Students pursuing the bachelor of arts in liberal arts in the College of Arts, Humanities, and Social Sciences may choose a minor field concentration in business. Students interested in this option should contact the Department of Philosophy and Liberal Studies at (501) 569-3312.
- Academic minors are offered in each of the departments of the COB. Consult the departmental entries in this chapter.
DEPARTMENT OF ACCOUNTING

The mission of the Department of Accounting is to provide high-quality educational experiences to equip students, primarily from central Arkansas, with the requisite accounting knowledge as well as personal and technological skills necessary for success in businesses and governments increasingly involved in international activity.

Department of Accounting
Educational Objectives
Students completing the accounting degree are expected to:
- Acquire a general understanding of systems and techniques for capturing, processing, analyzing, and communicating financial information useful to management, owners, governments, and others.
- Acquire a basic knowledge of current US generally accepted accounting principles (GAAP) and federal income tax law (IRC).
- Acquire a basic knowledge of the standards and procedures for audit or review of the outputs of financial accounting systems.
- Acquire a general familiarity with the global marketplace, including international accounting and problems encountered by the multinational firm.
- Participate in critiqued written or oral communication exercises in every upper-level accounting course.
- Use current technology including accounting software, audit software, electronic spreadsheets, tax return software, and presentation software.
- Exercise critical thinking skills through the use of case study analyses, group projects, and tax research skill.
- Be familiar with decisions to be made in the ethical arena of the marketplace.

BS in Accounting

Core Requirements (44 hours)¹

Pre-business Courses (27 hours)
MATH 1342 Business Calculus
ACCT 2310 Principles of Accounting I
ACCT 2330 Principles of Accounting II
ECON 2310 Business Statistics I
ECON 2312 Quantitative Methods
ECON 2322 Principles of Microeconomics
ECON 2323 Principles of Macroeconomics
MGMT 1310 Fundamentals of Information Technology
MKTG 2380 Legal Environment of Business

Professional Business Studies Core Courses (21 hours)
RHET 3316 Writing for the Workplace
FINC 3310 Business Finance
MGMT 3300 Organizational Behavior and Management
MGMT 3304 Production/Operations Management
MGMT 3305 Management Information Systems
MGMT 4305 Business Strategy and Policy
MKTG 3350 Principles of Marketing

Major Requirements (26 hours)²
ACCT 3311 Intermediate Financial Accounting I

1. See “Core Requirements for Bachelor Degrees” on page 27. Students who place above the MATH 1302 course may take MATH 1342 to satisfy the core math requirement and the pre-business mathematics requirement. Such students will have three semester hours of additional non-business electives. See a program advisor for more details.
2. A grade of C or greater is required in order to progress within the major course sequence and to graduate.

Unrestricted Electives (6 hours)
ACCT 3312 Intermediate Financial Accounting II
ACCT 3321 Federal Taxation I
ACCT 3330 Intermediate Cost and Managerial Accounting I
ACCT 3341 Accounting Information Systems
ACCT 3361 Accounting for Governments, Not-for-Profits, and Other Financial Issues
ACCT 4211 Accounting Issues
ACCT 4314 Advanced Financial Accounting
ACCT 4351 Auditing Theory and Practice I

Requirements to sit for the CPA Exam
A CPA candidate must have earned at least 150 semester hours including a baccalaureate degree and completed 30 semester hours in accounting at the undergraduate (with a minimum grade of C in each course) or graduate level, including coverage of, but not necessarily separate courses in, the subjects of financial accounting, auditing, taxation, management accounting, and governmental/not-for-profit accounting. Additional information is available from faculty in the Department of Accounting.

Minor in Accounting
A minor in accounting requires ACCT 2310, 2330, 3311, 3312, and two accounting electives.

Prerequisites
Students enrolling in any accounting course for which the designated prerequisite work has not been completed previously may be administratively dropped from the course.
Courses in Accounting (ACCT)

ACCT 1310 Introduction to Accounting and Taxation
Introduction to accounting and basic individual and small business taxation. The principles of record-keeping and federal income taxation are covered. Payroll and related tax procedures are included. Hands-on exercises to emphasize the fundamentals are incorporated into the course. Course is intended for students who are not business majors, and may not count toward a business degree. Three credit hours.

ACCT 2120 Personal Income Taxes
Federal and Arkansas income tax regulations that apply to individuals. Elements of taxable income, itemized and employee business deductions, personal exemptions, and credits against tax liability. Emphasizes tax return preparation. Not open to accounting majors. One credit hour.

ACCT 2310 Principles of Accounting I
Prerequisites: MGMT 1310 or equivalent, MATH 1302. Introduction to the field of accounting, fundamentals of financial accounting, recording, summarizing, and reporting cycle. Principles of asset valuation and income measurement; accounting systems and internal controls. Three credit hours.

ACCT 2330 Principles of Accounting II
Prerequisite: ACCT 2310 with C or greater. Continuation of ACCT 2310. Reporting for external investors. Management accounting and decision making. Three credit hours.

ACCT 3303 International Accounting
Prerequisites: MGMT 2330 and 2331, each with C or greater. Introduction to the nature of international accounting including similarities and dissimilarities in the recording and reporting of financial data. Focus on accounting as an aid and outcome of a global business strategy. Three credit hours.

ACCT 3311 Intermediate Financial Accounting I
Prerequisites: ACCT 2310 and 2330, each with C or greater, MATH 1302, MGMT 1310. Conceptual and historical framework underlying contemporary accounting and reporting: form and content of financial statements; revenue recognition; present value mathematics in accounting; measuring and reporting for cash and receivables; inventories; property, plant, and equipment. Three credit hours.

ACCT 3312 Intermediate Financial Accounting II
Prerequisite: ACCT 3311 with C or greater. Continuation of financial accounting. Measuring and reporting, current liabilities and contingencies, long-term liabilities, stockholders’ equity, income taxes, pensions, leases, cash flows, and special revenue recognition situations. Three credit hours.

ACCT 3321 Federal Taxation I
Prerequisite: ACCT 2310 and ACCT 2330 with C or greater or consent of the instructor. Introduction to federal income taxation, with emphasis on personal business and investment income and deductions, property transactions, and other topics related to taxation of individuals. Three credit hours.

ACCT 3330 Intermediate Cost and Managerial Accounting I
Prerequisites: ACCT 2310 and 2330, each with C or greater; MATH 1302; MGMT 1310. Conceptual framework for managerial accounting, measurement and reporting of cost information, including historical and standard cost systems, cost behavior analysis, accumulation and distribution of direct and indirect cost, and problems of joint and common costs. Three credit hours.

ACCT 3341 Accounting Information Systems
Prerequisite: ACCT 3311 with C or greater. Review of the evolution of accounting systems from manual systems to advanced automated systems, with emphasis on processing requirements and the EDI tools used in the automation of information systems; study of the internal control needs of accounting systems, both manual and EDI; microcomputer-based projects. Three credit hours.

ACCT 3361 Accounting for Governments, Not-for-Profits, and Other Financial Issues
Prerequisite: ACCT 3311 with C or greater. Fund accounting for governmental and not-for-profit entities. Financial and budgetary control, the budgetary process in government, special accounting, and reporting problems of the public and not-for-profit sector. Three credit hours.

ACCT 3372 Accounting for Construction
Prerequisites: ACCT 2310 with C or greater, ECON 2322. Designed to cover accounting topics and methods pertinent to the construction industry. The course will review fixed and variable costs, revenue forecasting, and budget development with ramifications on pricing. Depreciation and capital renewal will be covered as well as project cost estimation, allocating overhead, and cost control. Cash flow and debt management will be included as well as the benefits of post evaluation reviews. Not open to accounting majors. Three credit hours.

ACCT 3381 Advanced Business Law
See MKTG 3381.

ACCT 3391 Cooperative Education in Accounting
Prerequisites: major in accounting; junior standing; GPA of 3.0 or higher on all work completed; completion of or concurrent enrollment in ACCT 3311; consent of sponsoring faculty member and department chair prior to registration. Provides experience in an organizational setting designed to integrate accounting theory and practice. A written project, designed in consultation with the faculty member, and a minimum of 200 hours working for a participating employer during a semester are required. The exact activities and responsibilities related to the work experience must be specified in written agreements between the student, faculty member, employer, and the Office of Cooperative Education. Course is offered on a credit/no credit basis only, with credit being equivalent to C or greater performance. Three credit hours.

ACCT 4211 Accounting Issues
Prerequisite: ACCT 4314 with C or greater or concurrent enrollment. Current and pending accounting issues, regulation and tax legislation. Topics may include but are not limited to SEC and FASB pronouncements, Congressional legislation, IRS regulations, and rulings and judicial interpretations. Consists primarily of group discussion, lectures, guest speakers, and student presentations. May not be repeated for credit.

ACCT 4314 Advanced Financial Accounting
Prerequisite: ACCT 3312 with C or greater. Accounting for temporary and long-term investments, business combinations, consolidated financial reporting, and international operations. Three credit hours.

ACCT 4315 Development in Accounting Theory
Prerequisite: ACCT 3312 with C or greater. Investigation of the development of accounting theory. It focuses on the nature and development of accounting theory and its relation to the standard setting process. In addition, the relationship of accounting theory to the resolution of current issues is examined. Three credit hours.

ACCT 4322 Federal Taxation II
Prerequisite: ACCT 3321 with C or greater. 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. Dual-listed in the UALR Graduate Catalog as ACCT 5322. Three credit hours.

ACCT 4323 Research in Federal Taxation
Prerequisite: ACCT 4322 with C or greater or consent of instructor. Methods and tools of tax research as applied to both closed fact and controllable fact cases. Methods for locating and assessing relevant authority on specific tax questions is emphasized. Three credit hours.

ACCT 4330 Advanced Topics in Managerial Accounting
Prerequisite: ACCT 3310 with C or greater. Continuation of managerial accounting. Use of accounting information for planning and control, profit planning and control, cost/volume/profit and incremental analysis, capital budgeting, responsibility reporting and performance evaluation, transfer pricing, quantitative models, and decision simulation. Three credit hours.

ACCT 4342 Advanced Accounting Information Systems
Prerequisite: ACCT 3341 with C or greater. Accounting systems in a data-base 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; student project. Three credit hours.

ACCT 4351 Auditing Theory and Practice I
Prerequisites: ACCT 3312, 3330, and 3341, each with C or greater. Nature, history, and social role of auditing. Fundamentals of contemporary auditing theory and practice with emphasis on collection and evaluation of audit evidence and the audit report. Introduction to operations auditing, statistical sampling, and auditing EDP systems. Three credit hours.

ACCT 4352 Auditing Theory and Practice II
Prerequisites: ACCT 3341, 4351, each with C or greater. The expansion of the auditing function, including internal auditing, operational auditing, auditing EDP systems, and statistical sampling. SEC requirements, legal and ethical responsibilities, and comprehensive review of auditing standards. Dual-listed in the UALR Graduate Catalog as ACCT 5352. Three credit hours.

ACCT 4392 Internship
Prerequisites: at least 90 semester hours earned with a minimum overall grade point average of 3.00; B or higher grade in all upper-level accounting courses completed to include a minimum of twelve semester hours; consent of instructor and department chairperson. Practical experience in an organizational setting designed to integrate accounting theory and applications. A written report is required. Course is offered on a CR/NC basis only, with credit being equivalent to C or greater performance. Three credit hours.

ACCT 4299, 4399 Independent Study
Prerequisites: senior standing, consent of instructor. Independent investigation under faculty supervision of topics not offered in regular courses. Two or three credit hours.
DEPARTMENT OF ECONOMICS & FINANCE

Economics

Theoretical and quantitative analysis are applied within the context of institutional and cultural constraints to solve economic problems in the private and public sectors.

The department offers a bachelor of business administration in economics and a minor in economics for students not majoring in the College of Business.

Economics Educational Objectives

Students completing the economics degree should accomplish the following educational objectives:

- Understand, explain, and identify how markets work with respect to the determination of prices, quantities, and allocation of resources.
- Collect economic data and be able to analyze and forecast economic activity.
- List various supply and demand shocks and identify how they affect economic activity in a complete, traditional macroeconomic model.
- Understand models of economic growth.
- Understand and be able to differentiate between market structures and explain their implications for pricing, output, and efficiency issues.
- Understand and explain the theory of the firm including, but not limited to, pricing, optimal input mix, and marginal analysis.

Minor in Economics

The minor in economics, available to students majoring outside the COB, provides a market-oriented complement for many major fields of study. Students pursuing the economics minor must take ECON 2322, 2323, 3315, 3330, and six additional hours of approved upper-level electives in economics for a total of 18 hours. Students should be aware that ECON 2312 (or ECON 2311) or its equivalent is a prerequisite for ECON 2310.

BBA in Economics

Core Requirements (44 hours)†

Pre-business Courses (27 hours)

- MATH 1342 Business Calculus
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- ECON 2310 Business Statistics I
- ECON 2312 Quantitative Methods
- ECON 2322 Principles of Microeconomics
- ECON 2323 Principles of Macroeconomics
- MGMT 1310 Fundamentals of Information Technology
- MKTG 2380 Legal Environment of Business

† See "Core Requirements for Bachelor Degrees" on page 27. Students who place above the MATH 1302 course may take MATH 1342 to satisfy the core math requirement and the pre-business mathematics requirement. Such students will have three semester hours of additional non-business electives. See a program advisor for more details.

Professional Business Studies Core Courses (21 hours)

- RHET 3316 Writing for the Workplace
- FINC 3310 Business Finance
- MGMT 3300 Organizational Behavior and Management
- MGMT 3304 Production/Operations Management
- MGMT 3305 Management Information Systems
- MGMT 4380 Business Strategy and Policy
- MKTG 3350 Principles of Marketing

Electives in Economics (12 hours)

Unrestricted Electives (8 hours)

Upper-level Electives (3 hours)

Courses in Economics (ECON)

ECON 2301 Survey of Economics

The wants of individuals and societies are unlimited, while the resources for satisfying these wants are limited. Consequently, choices have to be made. Economics is the science of choice. Survey of Economics introduces students to the ability to use theories or models to make sense out of the real world and devise policy solutions to economic problems. Both individual and firm choices (microeconomics) and society choices (macroeconomics) are examined. The role of markets in summarizing choices and allocating resources is introduced. ECON 2301 will not satisfy the University Core Curriculum requirements if ECON 2322 and ECON 2323 are taken for graduation credit. Three credit hours.

ECON 2310 Business Statistics I

Prerequisite: MATH 1342 with grade of C or greater. An introduction to statistical methods from an economic and business perspective, including descriptive statistics, index numbers, probability theory as applied to statistical analysis, and an introduction to hypothesis testing. Three credit hours.

ECON 2311 Business Statistics II

Prerequisite: ECON 2310. An introduction to regression analysis with emphasis on underlying assumptions, violations of assumptions, and possible corrective measures. Students are required to develop and estimate a realistic regression model and interpret results. Three credit hours.

ECON 2312 Quantitative Methods

Prerequisites: MATH 1342 with grade of C or greater, and ECON 2310. An introduction to quantitative methods frequently used in business. Topics include regression analysis, decision analysis and expected values, Chi Square, sampling techniques, forecasting, linear programming, simulation, transportation problems, and queuing analysis. Students shall complete a term project. Three credit hours.

ECON 2322 Principles of Microeconomics

Prerequisite: MATH 1302. The theory of the individual firm in the economy, cost and price determination, income distribution, and welfare economics. Three credit hours.

ECON 2323 Principles of Macroeconomics

Prerequisite: MATH 1302 and ECON 2322. The monetary system, macroeconomic analysis of income, employment, price level, business fluctuations, and elements of international trade. Three credit hours.
**ECON 3301 Survey of Economics**
An overview of the science of economics. Basic economic laws and methods are presented followed by a survey of the two primary areas of economics: microeconomics and macroeconomics. Students will be introduced to the functioning of markets and the choice process individuals and societies are faced with while making economic decisions. Not for credit by business or economics majors. Three credit hours.

**ECON 3310 Money and Banking**
Prerequisite: ECON 2323. The nature and functions of money and the development of the Federal Reserve System, the role and activities of the Federal Reserve in the development of monetary policy. Three credit hours.

**ECON 3314 Mathematical Economics**
Prerequisites: ECON 2311 or 2312, 2322, 2323. Analysis of economic problems and theory using mathematics. Mathematical methods are used to demonstrate economic principles. Three credit hours.

**ECON 3315 Intermediate Microeconomic Analysis**
Prerequisites: ECON 2311 or 2312, 2322, 2323. Price and production theory, Consumer demand, the supply function, market pricing, and various degrees of competition. Three credit hours.

**ECON 3320 Business Forecasting**
Prerequisites: ECON 2312, 2322, 2323. Business fluctuations; seasonal, cyclical, trend, and secular components; measurement of fluctuations; and methods of predicting changes in business activity. Three credit hours.

**ECON 3330 Intermediate Macroeconomic Theory**
Prerequisites: ECON 2322, 2323. National income analysis and its implications for public policy; its historical development and present status, including recent business cycle development. Three credit hours.

**ECON 4305 Advanced Microeconomics**
Prerequisite: ECON 3315 or equivalent. Theoretical microeconomics covering the theory of distribution, general equilibrium, welfare economics, and other advanced topics. Three credit hours.

**ECON 4310 History of Economic Thought**
Prerequisites: ECON 2322, 2323. The development of contemporary economic theory. A study of the development of economic concepts, methods of analysis, and philosophies and their relation to contemporary theory. Three credit hours.

**ECON 4320 International Economics**
The theory and mechanics of international trade; balance of payments problems, commercial policy, and international investments. Three credit hours.

**ECON 4322 Resource Economics**
Prerequisites: ECON 2322 and 2323 or equivalents. Applied microeconomics concentrating on natural resources as they are used to maximize society’s total utility. Both the theoretical and actual aspects of natural resources as inputs to the production process are explored. Three credit hours.

**ECON 4324 Environmental Economics**
Prerequisite: junior standing. Applied microeconomics covering various aspects of environmental economics. The problems of preventing future pollution and cleaning past pollution in an economically efficient manner are explored. Economic theory, actual practice, and legal aspects of pollution are explored in the context of the trade-offs that must be considered. Three credit hours.

**ECON 4330 Public Finance**
Prerequisites: ECON 2322, 2323. The economic functions of government, public goods theory, Public sector decision making, financing, and consequences; public sector growth and institutions. Three credit hours.

**ECON 4340 Labor Economics**
Prerequisites: ECON 2322, 2323. Economics of labor as a factor in the production process; legislative aspects of labor-management relations; measurement of human capital; effects of union growth; role of organized labor in the economy. Three credit hours.

**ECON 4344 Introduction to Financial Economics**
Prerequisites: ECON 2323 or equivalent. Survey of capital markets and security market efficiency and introduction to portfolio theory, capital asset pricing, and agency theory. Implications for corporate financial policy decisions and financial market regulatory policy. Three credit hours.

**ECON 4347 Economics of Development**
Prerequisites: ECON 2322 and 2323 or equivalents. The study of how countries change their productive arrangements and change real per-capita income over time. Various development strategies are discussed. Three credit hours.

**ECON 4360 Independent Study**
Prerequisites: senior standing, consent of chairperson and instructor. Research and independent investigation in areas of economic analysis, economic policy, history of economic thought, and economic development. Three credit hours.

**ECON 4396 Cooperative Education I**
Prerequisites: senior standing, economics major, completion of at least 9 hours of upper-level economics courses with a grade of C or greater, cumulative GPA of 2.50, and consent of department chairperson prior to registration. Designated to complement and extend the classroom learning experience through the application of theories and concepts in a professional work environment. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities are dependent upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is accepted as elective credit in the economics major. Three credit hours.

**ECON 4397 Seminar in Economics**
Prerequisites: senior status and consent of faculty teaching course. Advanced economic topics in modular format and usually team taught. Topics will come from both the microeconomic and macroeconomic areas and may vary according to need. Three credit hours.
Finance

The finance curriculum provides a theoretical framework of the environment in which financial institutions operate. Individual courses deal with financial institutions, the financial management of business firms, investments, and particular institutional areas of banking, real estate, and insurance. Emphasis is on the decision making, or analytical, aspects of the subject areas.

The department offers four degree options ( emphases) in the finance area. Emphasis I (General Finance) provides training in business finance, financial decision making within the firm, and the financial and banking systems. Emphasis II (Real Estate) provides a broad background in real estate analysis, investment, and financial decision making. Emphasis III (Insurance and Risk Management) emphasizes principles of insurance and risk management, while Emphasis IV (Financial Planning) concentrates on personal financial planning. The last option is designed around the CFP program. Minors are offered in general finance and real estate.

To graduate, students majoring in finance must make a grade of C or greater FINC 3310 as well as in all courses that constitute the major.

Finance Educational Objectives

Students completing the finance degree should be able to:

• Demonstrate a thorough understanding of time value of money concepts by solving representative problems. This includes calculating present values, future values, and rates of return.
• Identify and explain the role and functioning of financial markets. Students should be able to explain the determination of interest rates, the role of financial intermediaries, the impact of risk and the connections across international markets.
• Value financial assets. This involves being able to explain risk-return trade-offs, asset pricing models, market efficiency, and international valuation. The student should be exposed to modern portfolio theory and option pricing theory.
• Identify and explain the investment and financing decisions of the firm, and how these decisions affect value. Students should be exposed to estimating the cost of capital, should be able to identify factors affecting capital structure and financing alternatives (domestic and international), and be exposed to firm valuation.
• Be exposed to the ethical issues involved in finance. In particular, the student should be exposed to agency theory and its implications for financial managers. This includes exposure to fiduciary issues.

Real Estate, Insurance, or Financial Planning Educational Objectives

Students specializing in real estate, insurance, or financial planning should:

• Be exposed to the theoretical concepts and principles of each.
• Be able to apply the principles to real problems.
• Be exposed to the professional and institutional aspects of each.

Minor in General Finance

A minor in general finance for students majoring outside the college requires ACCT 2310 and 2330, ECON 2322 and 2323, and FINC 3310 and 3350. Students should be aware that ECON 2310 (or its equivalent) is a prerequisite for FINC 3310 and that MATH 1342 (or its equivalent) is a prerequisite for ECON 2310.

Minor in Real Estate

A minor in real estate for students majoring outside the COB requires ECON 2322 and 2323, FINC 3310, 3370, 4371, and 4372. Students should be aware that ECON 2310 (or its equivalent) is a prerequisite for FINC 3310 and that MATH 1342 (or its equivalent) is a prerequisite for ECON 2310.

1. See “Core Requirements for Bachelor Degrees” on page 27. Students who place above the MATH 1302 course may take MATH 1342 to satisfy the core math requirement and the pre-business mathematics requirement. Such students will have three semester hours of additional non-business electives. See a program advisor for more details.
Insurance and Risk Management – Emphasis III

Major Requirements (21 hours)
FINC 3330 Principles of Insurance
FINC 3350 Investment Analysis
FINC 4341 Commercial Property and Liability Insurance
FINC 4360 Risk Management
FINC 4364 Employee Benefits
Two courses (6 hours) from the following:
ACCT 3321 Federal Taxation I
FINC 4320 Bank Financial Management
FINC 4365 Business Insurance and Estate Planning
FINC 4366 Introduction to Actuarial Science
FINC 4368 Professional Financial Planning
FINC 4371 Real Estate Finance and Investment
FINC 4372 Real Estate Valuation and Appraisal
FINC 4380 Portfolio Management
FINC 4383 Advanced Portfolio Management I
FINC 4396 Cooperative Education I
FINC 4399 Independent Study
Upper-level Electives (3 hours)
Unrestricted Electives (8 hours)

Financial Planning – Emphasis IV

Major Requirements (24 hours)
FINC 3330 Principles of Insurance
FINC 3350 Investment Analysis
FINC 4364 Employee Benefits
FINC 4365 Business Insurance and Estate Planning
FINC 4368 Professional Financial Planning
ACCT 3321 Federal Taxation I
Two courses from the following:
FINC 4341 Commercial Property and Liability Insurance
FINC 4360 Risk Management
FINC 4371 Real Estate Finance and Investment
FINC 4372 Real Estate Valuation and Appraisal
FINC 4380 Portfolio Management
FINC 4383 Advanced Portfolio Management I
FINC 4396 Cooperative Education I
FINC 4399 Independent Study
Upper-level Electives (3 hours)
Unrestricted Electives (5 hours)

Courses in Finance (FINC)

FINC 2300 Personal Finance
Personal financial planning, including bank deposits, savings accounts, life insurance, property and casualty insurance, retirement accounts, investment in stocks and bonds, housing. May not be taken for credit by business majors. Three credit hours.

FINC 3310 Business Finance
Prerequisites: ECON 2310, ECON 2322, ECON 3232, ACCT 2310, ACCT 2330. (May be taken concurrently with ECON 2323.) Business finance with emphasis on the modern corporation; methods of securing and managing assets; problems of bankruptcy, reorganizations; business combination. Three credit hours.

FINC 3330 Principles of Insurance
Prerequisite: FINC 3310 (may be taken concurrently). The phenomena of risk and risk bearing, including insurance and other methods of handling risks; introduction to the areas of property, marine, liability, disability, life insurance, and fidelity and surety bonding. Three credit hours.

FINC 3340 Financial Markets and Institutions
Prerequisite: FINC 3310 with a grade of C or greater. Examination and analysis of financial markets, such as savings institutions, banks, insurance companies, mutual funds, pension funds, and others. Three credit hours.

FINC 3350 Investment Analysis
Prerequisite: FINC 3310 with a grade of C or greater. Alternative investment opportunities, analysis of the economy, its industries, and particular businesses to determine the most desirable use of funds in terms of the objectives of individual and institutional investment programs. Three credit hours.

FINC 3370 Real Estate
Introduction to the real estate business; relationship of real estate to the national and local economies; legal instruments, appraisals, property sales, and management. Three credit hours.

FINC 4320 Bank Financial Management
Prerequisites: FINC 3310 with a grade of C or greater, 3340. Analysis and management of the asset and liability portfolio of depository financial institutions. Three credit hours.

FINC 4330 International Finance
Prerequisite: FINC 3310 with a grade of C or greater. Multinational corporate finance; practices and problems in international finance; balance of payments and exchange problems; recent developments and trends in international finance. Three credit hours.

FINC 4340 Life Insurance
Development of the human life value concept and financial consequences of economic death; types of insurers; types of life insurance and annuity contracts and their uses; premium and reserve calculations; introduction to programming for individuals, families, and institutions. Three credit hours.

FINC 4341 Commercial Property and Liability Insurance
Prerequisite: FINC 3310. Students will learn about commercial insurance coverage and how the business of insurance is conducted in practice. Topics covered include: underwriting, sales, marketing, claims adjustment, and pricing of insurance. Three credit hours.

FINC 4360 Risk Management
Prerequisite: FINC 3310 with a grade of C or higher. Introduction to the fundamentals of risk management. Scope and fundamentals of property and liability insurance; analysis of contracts, rating, underwriting, insurers, and loss adjustments and procedures. Three credit hours.

FINC 4363 Financing Entrepreneurial Ventures
Prerequisites: FINC 3310 and MGMT 3500. Financing alternatives for new and growing ventures; debt financing from investment banks, commercial banks, and SBI, as well as equity financing from angel investors, private placements, venture capitalists, and public equity markets. Students use firm valuation methods and calculate return to investors to create a capital plan for a growing enterprise. Three credit hours.

FINC 4364 Employee Benefits
Analysis of the nature of health and social insurance; causes, extent, and economic consequences of old-age dependency, unemployment, and disability; hospitalization and medical insurance, surgical benefits, major medical coverages, disability income contracts; review of Social Security and related social security programs. Three credit hours.

FINC 4365 Business Insurance and Estate Planning
Importance of and techniques for risk identification and analysis as a basis for recognition of insurance requirements; application of coverages to business and personal needs. Three credit hours.

FINC 4366 Introduction to Actuarial Science
Prerequisite: FINC 4340. Introduction to the mathematics of insurance as the basis for rate making, reserve and cash value calculations, and underwriting; importance of correct actual practices to company solvency and liquidity. Three credit hours.

FINC 4368 Professional Financial Planning
Prerequisite: FINC 3310 with a grade of C or greater, and permission of instructor. Professional financial planning is the capstone course for the financial planning track of the Insurance and Financial Services major. The course covers all the significant aspects of financial planning, including; gathering data and
FINC 4371 Real Estate Finance and Investment
Prerequisite: FINC 3370. Elements of mortgage financing for housing and investment property; sources of funds; application and approval; real estate investment analysis; effects of financing and income taxation upon investment returns. A term project analyzing a proposed real estate investment is required. Three credit hours.

FINC 4372 Real Estate Valuation and Appraisal
Prerequisite: FINC 3370. Principles of valuation and appraisal of housing and investment property; market, replacement, and income approaches. A term project appraising an existing income property is required. Three credit hours.

FINC 4177,4277,4377 Independent Study in Real Estate
Prerequisites: consent of chairperson and instructor. Supervised independent study in a real estate area of particular interest to the student. No more than six credit hours of Independent Study in Real Estate may apply toward a degree. Credit to be determined at the beginning of the semester. One, two, or three credit hours.

FINC 4380 Portfolio Management
Prerequisites: FINC 3310 with a grade of C or greater, 3350. Investment risks, returns, and requirements; portfolio policies for the individual and institutional investor; functions of the stock exchange, investment bankers, and brokers. Three credit hours.

FINC 4383 Advanced Portfolio Management I
Prerequisite: FINC 3350 for undergraduate or FINC 7320 for graduate credit, and consent of department. Theories of portfolio construction, rules, fundamental analysis, and efficient markets hypothesis as applied to portfolio management; investment goals and strategies; decision making on portfolio of Ford Investment Trust. Students must apply to enroll in this course; check with the department for application forms and deadlines. Enrollment is limited to 15 students, no more than 5 of whom may be graduate students. Dual-listed in the UALR Graduate Catalog as FINC 5383. Three credit hours.

FINC 4395 Advanced Financial Management
Prerequisites: Senior finance major with a grade of C or greater in FINC 3310, consent of chairperson and instructor. Sophisticated techniques of financial management. Application of the body of financial theory to specific problems. Three credit hours.

FINC 4396 Cooperative Education I
Prerequisites: senior standing, finance major, completion of at least 9 hours of upper level finance courses, cumulative GPA of 2.50, and consent of department chairperson prior to registration. Designated to complement and extend the classroom learning experience through the application of theories and concepts in a professional work environment. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities depend upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is accepted as elective credit in the finance major. Three credit hours.

FINC 4397 Seminar in Finance
Prerequisites: senior status and consent of faculty teaching course. Advanced finance topics offered in a modular format and usually team taught. Topics come from both the corporate and investments areas and may vary according to need. Three credit hours.

FINC 4399 Independent Study
Prerequisites: senior standing, consent of chairperson and instructor. Research and independent investigation in specific areas of finance of interest to the student. Three credit hours.
The international business major uses an interdisciplinary approach to study the intricacies of the international marketplace. This major focuses on the complexities and interconnections between the world’s markets and cultures. The goal is to prepare students to be managers in the twenty-first century.

There is a foreign language emphasis and a general business emphasis within the international business major. Their respective requirements are shown below. Students accepted into the international business program are advised by the international business coordinator and faculty.

International Business Educational Objectives

Students completing the international business degree should accomplish the following educational objectives:

- Understand the nature of international business.
- Understand the major trends in the international trade and investment patterns between and among the major groups of nations and the theories purporting to explain these patterns.
- Understand the nature of international organizations such as the United Nations, the International Bank for Reconstruction and Development (World Bank), International Monetary Fund, World Trade Organization, Organization for Economic Cooperation and Development and their effects on business.
- Understand the major financial, economic/socioeconomic, physical, environmental, socio-cultural, political, legal, labor, competitive, and distributive forces affecting international business.
- Understand the export and import practices, terminology, and documentation.
- Understand the functional areas of business economics, marketing, human resources, finance, operations, and control of international business.

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<th>BBA in International Business</th>
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Core Requirements (44 hours)<sup>1</sup>

Pre-business Courses (27 hours)

- MATH 1342 Business Calculus
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- ECON 2310 Business Statistics I
- ECON 2312 Quantitative Methods
- ECON 2322 Principles of Microeconomics
- ECON 2323 Principles of Macroeconomics
- MGMT 1310 Fundamentals of Information Technology
- MKTG 2380 Legal Environment of Business

International Business Major Requirements (15 hours)

- ACCT 3303 International Accounting
- ECON 4320 International Economics
- FINC 4330 International Finance
- MGMT 4377 International Business Management
- MKTG 4320 International Marketing

Unrestricted Electives (2 hours)

Professional Business Studies Core (21 hours)

- RHET 3316 Writing for the Workplace
- FINC 3310 Business Finance
- MGMT 3300 Organizational Behavior and Management
- MGMT 3304 Production/Operations Management
- MGMT 3305 Management Information Systems
- MKTG 4380 Business Strategy and Policy
- MKTG 3350 Principles of Marketing

Emphasis Area (15 hours)

See next page for Emphasis Areas

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1. See “Core Requirements for Bachelor Degrees” on page 27. Students who place above the MATH 1302 course may take MATH 1342 to satisfy the core math requirement and the pre-business mathematics requirement. Such students will have three semester hours of additional non-business electives. See a program advisor for more details.
Foreign Language Emphasis

Foreign language requirement (9 hours)
- FREN 2311 Intermediate French I, FREN 2315 Intermediate Conversational French, and FREN 3310 Integrated Skills I
- GERM 2311 Intermediate German I, GERM 2312 Intermediate German II, and GERM 3311 Advanced Composition and Conversation
- SPAN 2311 Intermediate Spanish, SPAN 2315 Intermediate Spanish Conversation, and SPAN 3311 Communications: Interpersonal

International Culture Requirement (3 hours)
(corresponding to language taken)
- FREN 3334 French Culture and Civilization I
- GERM 3334 German Culture and Civilization
- SPAN 3334 Hispanic Culture: Peninsular
- SPAN 3335 Hispanic Culture: Americas
- HIST 3317 Twentieth-Century Europe
- HIST 3328 Modern France
- HIST 3331 Modern Germany since 1806
- HIST 3372 History of Latin America: Republican Period
- HIST 3375 Modern Mexican History
- HIST 4378 The History of U.S.-Latin American Relations
- POLS 3360 Comparative Government: Western
- POLS 3370 Comparative Politics: Developing Areas
- POLS 4340 International Relations

Other courses as approved by coordinator

Business Electives (3 hours)
- ADVT 4370 International Promotion Management and Public Relations
- ECON 3320 Business Forecasting

General International Business Emphasis

International Culture Requirements (9 hours)
- FREN 2311 Intermediate French I
- GERM 2311 Intermediate German I
- GERM 2312 Intermediate German II
- SPAN 2311 Intermediate Spanish
- FREN 3334 French Culture and Civilization I
- GERM 3334 German Culture and Civilization
- SPAN 3334 Hispanic Culture: Peninsular
- SPAN 3335 Hispanic Culture: Americas
- HIST 3317 Twentieth-Century Europe
- HIST 3328 Modern France
- HIST 3331 Modern Germany since 1806
- HIST 3372 History of Latin America: Republican Period
- HIST 3375 Modern Mexican History
- HIST 4378 The History of U.S.-Latin American Relations
- POLS 3360 Comparative Government: Western
- POLS 3370 Comparative Politics: Developing Areas
- POLS 4340 International Relations

Other courses as approved by the coordinator

Business Electives (6 hours)
- ADVT 4370 International Promotion Management and Public Relations
- ECON 3320 Business Forecasting
- MKTG 4310 Marketing Research

Other courses as approved by the coordinator
The department offers two majors as baccalaureate degree programs: Management Information Systems and Management. Within the management major are three emphases: general management (offered on-campus and totally on-line), human resource management, and entrepreneurship and small business management. Four minors in management are offered to students majoring in fields outside the College of Business (COB): management information systems, general management (offered on-campus and totally online), human resource management, and entrepreneurship and small business management. All majors in the department are required to achieve a grade of C or greater in all courses required in their major; all majors must also complete all required minor courses with a 2.0 overall GPA; all non-business majors completing a minor within the department are required to achieve a grade of C or greater in all courses transferred to or taken at UALR in order to fulfill course requirements in the minor block of courses.

Management Information Systems

The Management Information Systems (MIS) program develops competencies in analysis, design, development, and management of business information systems. Emphasis is on the development of computer application in a business environment and the effective use of computer resources to meet business objectives. Students receive hands-on experience with client-server technologies through lab-based and independent projects.

MIS Educational Objectives

Students completing the MIS degree should accomplish the following educational objectives:

- Demonstrate the uses of appropriate system analysis and design methodologies to develop information systems that meet user needs.
- Design and implement business database management systems.
- Apply foundational concepts of client-server computing in the development and administration of such systems.
- Demonstrate good verbal skills.
- Demonstrate good written communication skills.
- Demonstrate good group communication skills.
- Understand the use of information technology as a strategic resource.

General Management

Students choosing the general management emphasis in the management major will develop conceptual skills and practical problem-solving techniques that apply to management and will be educated in management fundamentals and methods applicable to decision making. Emphasis is placed on the importance of organizational behavior in public and private enterprises and consideration of the public interest in making management decisions.

General Management Educational Goals

Students completing the general management emphasis should accomplish the following educational objectives:

- Understand and integrate appropriate strategic management concepts in the design and implementation of a corporate/business strategy. This objective includes defining the organization’s purpose/mission, setting objectives, determining opportunities and threats, monitoring competitors, crafting appropriate strategic actions, implementing appropriate structural and support systems, and providing strategic leadership.
- Understand the principles of planning, directing, and controlling the human resource management function and the components of a comprehensive personnel program involving the recruitment, development, evaluation, compensation, and motivation of an identified workforce.
- Understand the concepts underlying effective interpersonal relations and group/team leadership skills and be able to model the roles involved in making assignments, empowering, praising, coaching, evaluating, disciplining, decision making, and resolving conflict.
- Understand the principles of managing small businesses including management, marketing, finance, accounting, research, and development, and administration.

Human Resource Management

The human resource management (HRM) emphasis in management prepares students for careers in areas related to human resource management such as personnel management, workplace management, and training. The program stresses the importance of integrating individual goals with organizational objectives. Among issues and activities covered are the legal environment of employee relations; job analysis and design; employee planning; recruiting and selection; employee training and development; employee productivity improvement, compensation and other reward systems; union-management relations; and quality of work life.

HRM Educational Objectives

Students completing the human resource management emphasis should accomplish the following educational objectives:

- Understand and be able to integrate appropriate strategic management concepts in the design and implementation of a corporate/business strategy. This objective includes defining the organization’s purpose/mission, setting objectives, determining opportunities and treats, monitoring competitors, crafting appropriate strategic actions, implementing appropriate structural and support systems, and providing strategic leadership.
- Understand the principles of planning, directing, and controlling the human resource management function and the components of a comprehensive personnel program involving the recruitment, development, evaluation, compensation, and motivation of an identified workforce.
- Understand the concepts underlying effective interpersonal relations and group/team leadership skills and be able to model the roles involved in making assignments, empowering, praising, coaching, evaluating, disciplining, decision making, and resolving conflict resolution.

Entrepreneurship and Small Business Management

The entrepreneurship and small business management (ESBM) emphasis in the management major develops conceptual and applied skills requisite to developing and managing an economically successful small business. Entrepreneurial talents are focused and practical decision making skills are developed through experiential activities in small businesses.
ESBM Educational Objectives

Students completing the ESBM emphasis should accomplish the following educational objectives:

• Understand and be able to integrate appropriate strategic management concepts in the design and implementation of a corporate/business strategy. This objective includes defining the organization’s purpose/mission, setting objectives, determining opportunities and threats, monitoring competitors, crafting appropriate strategic actions, implementing appropriate structural and support systems, and providing strategic leadership.

• Understand the principles of planning, directing, and controlling the human resource management function and the components of a comprehensive personnel program involving the recruitment, development, evaluation, compensation, and motivation of an identified workforce.

• Understand the principles of managing small businesses, including management, marketing, finance, accounting, research and development, and administration.

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BBA in Management Information Systems

Core Requirements (44 hours)

Pre-business Courses (27 hours)
- MATH 1342 Business Calculus
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- ECON 2310 Business Statistics I
- ECON 2312 Quantitative Methods
- ECON 2322 Principles of Microeconomics
- ECON 2323 Principles of Macroeconomics
- MGMT 1310 Fundamentals of Information Technology
- MKTG 2380 Legal Environment of Business

Professional Business Studies Core (21 hours)
- RHET 3316 Writing for the Workplace
- FINC 3310 Business Finance
- MGMT 3300 Organizational Behavior and Management
- MGMT 3304 Production/Operations Management
- MGMT 3305 Management Information Systems
- MGMT 4380 Business Strategy and Policy
- MKTG 3350 Principles of Marketing

Required MIS Courses (18 hours)
- MGMT 3307 Systems Development Methodologies
- MGMT 3310 Business Applications in COBOL
- MGMT 4312 Object-Oriented Programming
- MGMT 3352 Advanced Personal Computer Applications
- MGMT 4310 Local Area Networks
- MGMT 4331 Management of Information Resources
- MGMT 4350 Business Database Management Systems

Required Electives (9 hours)
- MGMT 4309 Seminar: Special Topics in CIS/MIS
- MGMT 4311 Advanced Network Technologies
- MGMT 4355 Information Systems Development Project
- CPSC 2376 Programming II
- CPSC 1375 Programming I and CPSC 1175 Introduction to Computer Science Laboratory

Not more than one of the following:
- MGMT 3320 Human Resources Management
- MGMT 3340 Applied Organizational Behavior
- MGMT 3362 Small Business Management
- MGMT 3380 Business Communication
- MGMT 4361 Entrepreneurship
- MGMT 4377 International Business Management

Unrestricted Electives (2 hours)

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1. See “Core Requirements for Bachelor Degrees” on page 27. Students who place above the MATH 1302 course may take MATH 1342 to satisfy the core math requirement and the pre-business mathematics requirement. Such students will have three semester hours of additional non-business electives. See a program advisor for more details.

2. If CPSC 1375/1175 is chosen, unrestricted electives for the degree will be decreased to one hour.

BBA in Management

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Core Requirements (44 hours)

Pre-business Courses (27 hours)
- MATH 1342 Business Calculus
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- ECON 2310 Business Statistics I
- ECON 2312 Quantitative Methods
- ECON 2322 Principles of Microeconomics
- ECON 2323 Principles of Macroeconomics
- MGMT 1310 Fundamentals of Information Technology
- MKTG 2380 Legal Environment of Business

Professional Business Studies Core (21 hours)
- RHET 3316 Writing for the Workplace
- FINC 3310 Business Finance
- MGMT 3300 Organizational Behavior and Management
- MGMT 3304 Production/Operations Management
- MGMT 3305 Management Information Systems
- MGMT 4380 Business Strategy and Policy
- MKTG 3350 Principles of Marketing

Emphasis Area (27 hours)
- See next page for emphasis areas.

Unrestricted Electives (5 hours)
Emphasis Areas in Management:

General Management Emphasis
- MGMT 3320 Human Resources Management
- MGMT 3340 Applied Organizational Behavior
- MGMT 3362 Small Business Management
- MGMT 4377 International Business Management

Five courses (15 hours) from the following:
- MGMT 3302 Organizational Theory
- MGMT 3306 Quality Assurance and Improvement
- MGMT 3352 Advanced Personal Computer Applications
- MGMT 3380 Business Communication
- MGMT 4304 Production/Operations Management II
- MGMT 4330 Inventory and Logistics Management
- MGMT 4360 Compensation Management
- MGMT 4361 Entrepreneurship
- MGMT 4378 Global Operations Management
- MGMT 4385 Special Topics in Management
- MGMT 4391 Employment Law

Human Resource Management Emphasis
- MGMT 3320 Human Resources Management
- MGMT 3340 Applied Organizational Behavior
- MGMT 4341 Labor and Industrial Relations
- MGMT 4360 Compensation Management
- MGMT 4391 Employment Law

Four courses (12 hours) from the following:
- FINC 4364 Employee Benefits
- MGMT 3352 Advanced Personal Computer Applications OR MGMT 3380 Business Communication
- MGMT 4342 Negotiation and Administration of Collective Bargaining Agreements
- MGMT 4385 Special Topics in Management
- MGMT 3362 Small Business Management or MGMT 3364 Family Business Management or MGMT 4377 International Business Management
- SPCH 3316 Interviewing

Minors in Management

A grade of C or greater in all UALR or transfer courses is required in order to fulfill a course requirement in each of these minor blocks of courses.

Management Information Systems Minor
- MGMT 3305 Management Information Systems
- MGMT 3352 Advanced Personal Computer Applications
- MGMT 4331 Management of Information Resources

Four courses or (12 hours) from the following (with approval of the management department chair):
- ACCT 2310 Principles of Accounting I
- MGMT 3307 Systems Development Methodologies
- MGMT 3310 Business Applications in COBOL
- MGMT 4312 Object-Oriented Programming
- MGMT 4309 Seminar: Special Topics in CIS/MIS
- MGMT 4310 Local Area Networks
- MGMT 4311 Advanced Network Technologies
- MGMT 4350 Business Database Management Systems
- MGMT 4355 Information Systems Development Project

Management Minor (18 hours)
- MGMT 3300 Organizational Behavior and Management
- MGMT 3320 Human Resources Management

Four courses (12 hours) from:
- ACCT 2310 Principles of Accounting I
- MGMT 3305 Management Information Systems
- MGMT 3340 Applied Organizational Behavior
- MGMT 3362 Small Business Management

Entrepreneurship and Small Business Management Emphasis
- MGMT 3320 Human Resources Management
- MGMT 3362 Small Business Management
- MGMT 4361 Entrepreneurship
- MGMT 4363 Financing Entrepreneurial Ventures

Five courses (15 hours) from the following:
- MGMT 3340 Applied Organizational Behavior
- MGMT 3352 Advanced Personal Computer Applications
- MGMT 3364 Family Business Management
- MGMT 3365 Small Business Consulting
- MGMT 4360 Compensation Management
- MGMT 4385 Special Topics in Management
- MGMT 4391 Employment Law
- MGMT 4394 Internship

No more than two courses from:
- MKTG 3351 Sales Operations
- MKTG 3370 Principles of Retailing
- MKTG 3385 Consumer Analysis and Behavior
- MKTG 4310 Marketing Research
- MKTG 4330 Services Marketing
- MKTG 4370 Business-to-Business Marketing
- MKTG 4385 Marketing Management
- ADVT 3300 Principles of Advertising

Minors in Management

A grade of C or greater in all UALR or transfer courses is required in order to fulfill a course requirement in each of these minor blocks of courses.

Management Information Systems Minor
- MGMT 3305 Management Information Systems
- MGMT 3352 Advanced Personal Computer Applications
- MGMT 4331 Management of Information Resources

Four courses or (12 hours) from the following (with approval of the management department chair):
- ACCT 2310 Principles of Accounting I
- MGMT 3307 Systems Development Methodologies
- MGMT 3310 Business Applications in COBOL
- MGMT 4312 Object-Oriented Programming
- MGMT 4309 Seminar: Special Topics in CIS/MIS
- MGMT 4310 Local Area Networks
- MGMT 4311 Advanced Network Technologies
- MGMT 4350 Business Database Management Systems
- MGMT 4355 Information Systems Development Project

Management Minor (18 hours)
- MGMT 3300 Organizational Behavior and Management
- MGMT 3320 Human Resources Management

Four courses (12 hours) from:
- ACCT 2310 Principles of Accounting I
- MGMT 3305 Management Information Systems
- MGMT 3340 Applied Organizational Behavior
- MGMT 3362 Small Business Management

Entrepreneurship and Small Business Management Minor
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- MGMT 3300 Organizational Behavior and Management
- MGMT 3362 Small Business Management
- MGMT 4361 Entrepreneurship

Two courses (6 hours) from:
- MGMT 3320 Human Resources Management
- MGMT 3352 Advanced Personal Computer Applications
- MGMT 3364 Family Business Management
- MGMT 3365 Small Business Consulting
Courses in Management (MGMT)

MGMT 1300 Introduction to Business
A survey of business organization and operation, the various fields of business, basic business problems and procedures, the vocabulary of business, and the opportunities open to college graduates in business. Not open to junior and senior majors within the college. Three credit hours.

MGMT 1310 Fundamentals of Information Technology
An introduction to computer information system concepts and the components and capabilities of a computer system. Emphasis on the development of spreadsheet and word processing competencies. Three credit hours.

MGMT 1350 Beginning Keyboarding Applications
Techniques of touch typewriting, skill building, and the production of letters, tables, and manuscripts. Five hours lab. Three credit hours.

MGMT 3350 Global Business Environments
Prerequisite: MGMT 3300. Study of organizations including system and subsystem designs and their integration with the external environment. Emphasis on contingency views of organization and management. Three credit hours.

MGMT 3351 Advanced Keyboarding Applications
Prerequisite: MGMT 3350 or one year of high school typewriting. Emphasis on speed and accuracy and related techniques of word processing systems as a tool for management of organizations. Three credit hours.

MGMT 3355 Professionalism in Business
Three credit hours.

MGMT 3360 Introduction to Business Communication
Prerequisite: MGMT 3300. Emphasis on the effective implementation of a comprehensive personnel program, including the development of interpersonal skills, including the recruitment, development, evaluation, and motivation of employees. Three credit hours.

MGMT 3370 Quality Assurance and Improvement
Prerequisite: MGMT 3310. An introduction to the impact of computer-based automation systems on the management of organizations with emphasis on information processing systems as a tool for management of organizations. Three credit hours.

MGMT 4301 Administrative Office Management
Prerequisite: MGMT 3360. Teams of students consult with local small businesses recommended by the Small Business Development Center. Students work on problems in accounting, forecasting, business operations, personnel, finance, insurance, and information systems. Emphasis on interpersonal communication skills and organizational management. Three credit hours.

MGMT 4302 Office Personnel Development
Prerequisite: MGMT 3360. Three credit hours.

MGMT 4303 Business Administration
Prerequisite: MGMT 3300. Three credit hours.

MGMT 4304 Production/Operations Management
Prerequisites: MGMT 3300, CPSC 1310, and CPSC 1330. Emphasis on production and operations management. Three credit hours.

MGMT 4306 Information Systems Management
Prerequisite: MGMT 3350. An introduction to computer-based systems in management with emphasis on system analysis and design. Three credit hours.

MGMT 4309 Seminar: Special Topics in CIS/MIS
Prerequisite: MGMT 3300. Three credit hours.

MGMT 4310 Local Area Networks
Prerequisite: senior standing or consent of instructor. Students will study topics related to the implementation of local area network systems, including LAN design and installation, system component selection, administration, security, and control. An overview of major LAN systems. Three credit hours.

MGMT 4311 Advanced Network Technologies
Prerequisite: MGMT 4310 or consent of the instructor. Advanced study of the role of computer networks in information resource management, with emphasis on current and future business applications in a local area network environment. Three credit hours.
MGMT 4312 Object-Oriented Programming
Beginning object-oriented programming course. Focuses on business problem solving and solution development. Three credit hours.

MGMT 4330 Inventory and Logistics Management
Prerequisite: ECON 2312. The fundamentals of inventory planning and control, including forecasting, economic lot size, materials control, aggregate inventory, the control process, and material requirements planning. This course is suitable as preparation for the inventory module of the CPIM examination and the logistics module of the CIRM exam. Three credit hours.

MGMT 4331 Management of Information Resources
Prerequisite: MGMT 3305 or consent of instructor. Addresses the role of information and of the chief information officer-decisional, interpersonal, and informational roles; issues regarding organizational strategy and information management addressed within three frameworks: centralized information system, decentralized, competition, and issues concerning the operational activities within the information system. Three credit hours.

MGMT 4341 Labor and Industrial Relations
The industrial relations system and environment, including legal and economic constraints on participants in the bargaining process. Emphasis on collective bargaining as a power relationship in a conflict situation. Three credit hours.

MGMT 4342 Negotiation and Administration of Collective Bargaining
Agreements
Lecture and extensive use of case studies to develop the strategy and tactics of contract negotiation, application, and interpretation. Emphasis on the grievance process and arbitration. Three credit hours.

MGMT 4350 Business Database Management Systems
Addresses the concepts and principles underlying the design and application of relational database management systems. The course provides an in-depth study of data semantics, graphics-based data modeling, relational algebra, the database design, and normalization theory. Projects, which typically are implemented using a current commercial database management system software, are used to reinforce most of the concepts. Dual-listed in the UALR Graduate Catalog as MGMT 5350. Three credit hours.

MGMT 4355 Information Systems Development Project
Prerequisite: MGMT 3307, MGMT 3312, and MGMT 4350. Emphasis on development of an information system project using structured analysis methodology and tools developed in previous MIS courses. The class forms project teams; accepts developmental assignments; and follows the systems development life cycle process to design a new system. Students are required to produce a working system. Three credit hours.

MGMT 4360 Compensation Management
Prerequisite: MGMT 3320. Administration of the total compensation program as a tool of management, including the use of job descriptions, job analysis and evaluation, and other necessary considerations in initiating and executing wage and salary administration. Three credit hours.

MGMT 4361 Entrepreneurship
Prerequisites: ACCT 2330, MGMT 3300, MKTG 3350, or consent of instructor. The role of the entrepreneur in new venture development. Identifying, assessing, and developing entrepreneurial opportunities. Dual-listed in the UALR Graduate Catalog as MGMT 5361. Three credit hours.

MGMT 4363 Financing Entrepreneurial Ventures
Prerequisites: FINC 3310 and MGMT 3300. Financing alternatives for new and growing ventures; debt financing from investment banks, commercial banks, and SBC, as well as equity financing from angel investors, private placements, venture capitalists, and public equity markets. Students use firm valuation methods and calculate return to investors to create a capital plan for a growing enterprise. Three credit hours.

MGMT 4370 Government and Business
Prerequisite: ECON 2322 or 2323. The philosophy and historical background of governmental intervention in the private sector of the economy. Principles of competition and monopoly; federal and state regulation; and business ethics. Three credit hours.

MGMT 4372 Construction Business Management
Surveys organizational and management topics from the perspectives of the construction industry. Missions, goals and objectives, strategies, and organizational structures are reviewed. Business plans are developed along with practice in using decision models. Total quality management is reviewed along with training plans. Also covered are external relations to regulation, unions, communities, suppliers, and customers. Three credit hours.

MGMT 4377 International Business Management
Prerequisite: MGMT 3300 or consent of the instructor. Key objectives are to define and evaluate the field of international business, to analyze the international operating context, and to discuss the management of key functional activities in firms operating in global markets. Major topics include the nature of international business; economic theory and international business operations; international systems and institutions and the analysis of key dimensions of the overseas operating environment. The management of the primary functional activities in international firms emphasized, with the focus on strategies, tactics, and structures for dealing with the special problems and challenges arising in global markets. Three credit hours.

MGMT 4378 Global Operations Management
Prerequisites: MGMT 3304 or senior standing and consent of the instructor. Focuses on managing manufacturing and service operations across national boundaries to provide an organization with a competitive advantage. Emphasizes strategic benefits of globalization through coordinated operations located in different countries and mastering both technological and social/cultural obstacles. Students analyze a series of cases that address the unique issues of global operations management. Three credit hours.

MGMT 4380 Business Strategy and Policy
Prerequisites: MGMT 1310 and 3300, RHET 3316, ECON 2312, FINC 3310, MKTG 3350, and be an officially accepted College of Business major. Integration of business concepts and techniques and their application to the development of corporate strategy and strategic planning by senior corporate executives. Includes setting objectives, developing business purposes, determining opportunities and threats, and implementing decision and control systems across functional areas. Three credit hours.

MGMT 4385 Special Topics in Management
Topics of current relevance to management professionals. Three credit hours.

MGMT 4391 Employment Law
An examination of legal problems involving employment discrimination based on race, color, religion, sex, national origin, or age. Examines the impact of developing principles of employment law on pre-employment inquiries and testing, seniority and promotions, and other personnel policies, practices, and procedures; affirmative action requirements; state and federal law used to resolve employment discrimination claims; the procedural framework for raising and adjudicating such claims before administrative agencies and the courts; requirements of the Fair Labor Standards Act, Equal Pay Act, ERISA, Worker’s Compensation, and OSHA; and current issues such as sexual harassment and employee dismissal. Three credit hours.

MGMT 4393 Cooperative Education II
Prerequisites: MGMT 3392 and consent of instructor and department chair prior to enrolling in the course. Provides experience in an organizational setting designed to integrate theory and practice. Course is offered on a credit/no credit basis only, with credit being equivalent to C or greater performance. Three credit hours.

MGMT 4394 Internship
Prerequisites: at least 90 semester hours earned with a minimum overall grade point average of 3.0 or department approval; a minimum of 12 semester hours of upper-level management courses completed; consent of instructor and department chair. Practical experience in an organizational setting designed to integrate management theory and applications. A written report is required. Course is offered on a credit/no credit basis only, with credit being equivalent to C or greater performance. Three credit hours.
DEPARTMENT OF MARKETING & ADVERTISING

The primary mission of the department is to prepare students for a professional career in marketing and/or advertising in the private and public sectors. The knowledge, analytical skills, and technical expertise required of marketing professionals are emphasized. The curriculum also provides a solid foundation for students planning graduate study in marketing and business.

Educational Objectives

Students completing a marketing or advertising degree should accomplish the following educational objectives:

- Develop an understanding of the role of marketing in the global economy and within individual organizations.
- Develop an understanding of the ethical and social responsibilities of marketers.
- Develop an understanding of the nature and methods of marketing management, including marketing organization, marketing strategy planning, the development of marketing plans and programs, and the implementation and control of marketing programs.
- Develop an understanding of the nature of the marketing environment and the process of environmental analysis.
- Develop an understanding of the nature of consumer and institutional buyer markets, including an understanding of consumer and institutional buyer behavior.
- Develop an understanding of the process of market segmentation and finding target market opportunities.
- Develop an appreciation of the value of marketing information and an understanding of the marketing research process for obtaining marketing information.
- Develop an understanding of the marketing mix variables used by marketers in decision making, including the following:
  - Product management
  - Marketing logistics management
  - Marketing communications and promotion management
  - Pricing management.

Major Requirements for Degrees in the Department of Marketing and Advertising

The degree requirements for the degrees offered in the marketing and advertising department at UALR are outlined in the charts on the following page.

Minors in Marketing and Advertising/Public Relations

The department offers two minors, one in marketing and one in advertising/public relations.

A minor in marketing requires 18 hours from MKTG 3350, 3385, 4310, ADVT 3300, and six hours of upper-level marketing electives. This may include three hours of upper-level advertising.

A minor in advertising/public relations requires 24 hours consisting of MKTG 3350, 4310; ADVT 3300, 3310, 4310, 4320; MKTG 4320 or ADVT 4370, and JOUR 2350.

Public Relations

The department, in cooperation with the journalism program in the School of Mass Communication, also offers a sequence in public relations. The purpose of this sequence is to prepare students to become public relations specialists through a variety of communication skills courses. Students in this sequence will be exposed to the journalistic aspects of public relations through course work in print and broadcast news media and in advertising and public relations, thus combining study in communication skills with study in the business and management aspects of the field.

Course options (48 hours) for the public relations sequence are listed in the chart on the following page.

A student seeking to specialize in public relations may declare a major either in marketing and advertising or in journalism. See the chairperson of the Department of Marketing and Advertising or the director of the School of Mass Communication for more information.
BBA in Advertising/Public Relations

Core Requirements (44 hours)²

Pre-business Courses (27 hours)

- MATH 1342 Business Calculus
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- ECON 2310 Business Statistics I
- ECON 2312 Quantitative Methods
- ECON 2322 Principles of Microeconomics
- ECON 2323 Principles of Macroeconomics
- MGMT 1310 Fundamentals of Information Technology
- MKTG 2380 Legal Environment of Business

Professional Business Studies Core (21 hours)

- RHET 3316 Writing for the Workplace
- FINC 3310 Business Finance
- MGMT 3300 Organizational Behavior and Management
- MGMT 3304 Production/Operations Management
- MGMT 3305 Management Information Systems
- MGMT 4380 Business Strategy and Policy
- MKTG 3350 Principles of Marketing

Major Requirements (30 hours)

- ARST 3340 Graphic Design I
- JOUR 2350 Techniques of Writing for the Mass Media
- RTVF 2300 Audio and Video Practicum
- ADVT 3300 Principles of Advertising
- ADVT 3310 Advertising Campaign I
- ADVT 4310 Public Relations
- ADVT 4320 Advertising Campaign II
- MKTG 3385 Consumer Analysis and Behavior
- MKTG 4320 International Marketing or ADVT 4370 International Promotion Management and Public Relations
- MKTG 4310 Marketing Research

Public Relations Courses

- JOUR 2330 Mass Media and Society
- JOUR 2350 Techniques of Writing for the Mass Media
- JOUR 3320 Reporting Principles
- MKTG 3350 Principles of Marketing¹
- SPCH 3320 Advanced Public Speaking¹
- JOUR 3350 News Editing
- JOUR 4380 Public Relations Writing
- ADVT 3300 Principles of Advertising
- JOUR 4350 Editing, Design, and Production
- JOUR 4352 Mass Communication Law
- ADVT 4310 Public Relations
- MKTG 4310 Marketing Research¹
- JOUR 4382 Public Relations Case Studies and Campaigns
- ADVT 4370 International Promotion Management and Public Relations

Two courses (6 hours) from the following:
- ADVT 3310 Advertising Campaign I
- ADVT 4320 Advertising Campaign II
- JOUR 3330 Photojournalism
- JOUR 3375 Feature Writing
- JOUR 4390 Mass Communication Internship
- RTVF 2308 Introduction to Scriptwriting
- SPCH 4311 Organizational Communication¹

Unrestricted Electives (2 hours)

BBA in Marketing

Core Requirements (44 hours)²

Pre-business Courses (27 hours)

- MATH 1342 Business Calculus
- ACCT 2310 Principles of Accounting I
- ACCT 2330 Principles of Accounting II
- ECON 2310 Business Statistics I
- ECON 2312 Quantitative Methods
- ECON 2322 Principles of Microeconomics
- ECON 2323 Principles of Macroeconomics
- MGMT 1310 Fundamentals of Information Technology
- MKTG 2380 Legal Environment of Business

Professional Business Studies Core (21 hours)

- RHET 3316 Writing for the Workplace
- FINC 3310 Business Finance
- MGMT 3300 Organizational Behavior and Management
- MGMT 3304 Production/Operations Management
- MGMT 3305 Management Information Systems
- MGMT 4380 Business Strategy and Policy
- MKTG 3350 Principles of Marketing

Major Requirements (30 hours)

- PSYC 2300 Psychology and the Human Experience
- SOCI 2300 Introduction to Sociology
- ADVT 3300 Principles of Advertising
- MKTG 3385 Consumer Analysis and Behavior
- MKTG 4310 Marketing Research
- MKTG 4340 Product and Service Strategy
- MKTG 4385 Marketing Management

MKTG Electives (9 hours)

(six hours of these electives may be upper-level ADVT courses)

Unrestricted Electives (2 hours)

¹. When not counted as a mass communication course.
². See "Core Requirements for Bachelor Degrees" on page 27. Students who place able the MATH 1302 course may take MATH 1342 to satisfy the core math requirement and the pre-business mathematics requirement. Such students will have three semester hours of additional non-business electives. See a program advisor for more details.
Courses in Marketing (MKTG)

MKTG 2380 Legal Environment of Business
Introduction to the American legal system. Provides a background of the legal environment which pertains to profit and nonprofit organizations, along with ethical considerations and social and political influences as they affect such organizations. Three credit hours.

MKTG 3350 Principles of Marketing
Prerequisite: junior standing. Introduction to the structure and functions of the marketing system of society and to the marketing practices of the major industries. Includes examination of the environments of marketing decision making, marketing institutions and agencies, and marketing practices of organizations. Three credit hours.

MKTG 3351 Sales Operations
Prerequisite: junior standing. An examination of the requirements and responsibilities of professional sales representatives, including knowledge and skill requirements, market development, preparation, effective sales communications, and customer relations. Three credit hours.

MKTG 3352 Seminar in Current Topics
Prerequisite: 54 or more credit hours. Topics of current interest and importance in marketing and advertising/public relations. Three credit hours.

MKTG 3361 Physical Distribution
Prerequisite: MKTG 3350. Examines the marketing and cost-saving opportunities in the physical movement of goods between supplier, manufacturer, and consumer. Specific functions such as transportation, warehousing, packaging, material handling, order processing, and others will be studied and integrated into various distribution strategies. Three credit hours.

MKTG 3370 Principles of Retailing
Prerequisite: MKTG 3350. Principles of retail store management, including competition, trade area analysis, location analysis, merchandising and inventory control, store layout, promotion, managing employees, and customer service. Three credit hours.

MKTG 3381 Advanced Business Law
Prerequisite: MKTG 2380. A comprehensive overview of business law including the law of contracts, commercial paper, bankruptcy, agency, organizations, sales, property, securities, and other topics of interest to business students and particularly to those majoring in accounting who intend to take the CPA exam. This course does not apply toward the marketing elective requirement. Three credit hours.

MKTG 3385 Consumer Analysis and Behavior
Prerequisites: PSYC 2300, MKTG 3350. An analysis of the personal, environmental, and interpersonal forces affecting consumer decisions and of their implications for marketing strategy development. Three credit hours.

MKTG 4199 Honors Seminar in Marketing
Prerequisites: senior standing, consent of instructor. A study of the development and use of information for marketing decision making; research methods applied to problems of market segmentation, pricing, distribution, promotional strategy, and development of marketing strategies. Three credit hours.

MKTG 4320 International Marketing
Prerequisite: MKTG 3350. Introduction to the major dimensions of the international marketing environment. Study of planning for and managing international marketing operations. The focus is on strategies, procedures and structures for dealing with the particular problems and challenges arising in the international marketing process. Three credit hours.

MKTG 4330 Services Marketing
Prerequisites: junior standing, MKTG 3350. Examines the major differences between goods and services, as well as the problems associated with these differences. Strategic aspects of the 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. Three credit hours.

Courses in Advertising (ADVT)

ADVT 3300 Principles of Advertising
Prerequisite: MKTG 3350. Fundamentals of local, national, and international advertising are covered, including social, ethical, and legal/regulatory aspects. Major members of the industry are discussed including advertisers, agencies, and the media. The advertising process is detailed, including research, strategic planning, marketing planning, copyrighting, art direction, and media planning and selection. Three credit hours.

ADVT 3310 Advertising Campaign I
Prerequisite: ADVT 3300. Fundamentals of advertising from the advertisers perspective as an integrated element of the promotion mix are covered, including the administration of advertising campaigns, budgets, media planning, and advertising research. Three credit hours.

ADVT 4340 Product and Service Strategy
Prerequisite: MKTG 3350. Examines the key tasks facing brand managers, including analyzing the marketing environment and developing objectives and strategies for the product or service. Involves the day-to-day responsibilities for managing either a single product or service or a closely-related product line. Heavy emphasis on marketing mix decisions concerning pricing, product, service, promotion, and distribution strategies. Students work in brand management teams to develop a marketing plan for a product or service. Three credit hours.

ADVT 4350 Sales Management
Prerequisite: MKTG 3350. Administration of the professional sales force. Includes recruitment, selection, training, organization, motivation, compensation, routing and scheduling, and control of sales staff. Three credit hours.

ADVT 4360 Purchasing
Prerequisite: MKTG 3350. Management of materials acquisition and control as it relates to the engineering, production, marketing, and finance functions of the organization. Three credit hours.

ADVT 4370 Business-to-Business Marketing
Prerequisite: MKTG 3350. Cases and concepts of marketing products from one business to another. This course includes specific strategies and techniques for the development of product policy, pricing, promotion, and distribution of business products. Three credit hours.

ADVT 4378 Real Estate Law
Prerequisite: FINC 3370. An introduction to the nature of real property: ownership rights and estates; descriptions; easements, fixtures, liens, sales, land contracts; mortgage law; deeds and property transfers; cooperatives and condominiums; wills and intestate succession; zoning; and recent developments. This course does not apply toward the marketing elective requirement. Three credit hours.

ADVT 4381 International Business Transactions
Prerequisite: MKTG 2380. The study of international business transactions, with emphasis on national power to regulate trade and the world economy. Legal problems in international transactions, trade contracts, terms of trading, and letters of credit, and economic regulation and extraterritorial laws. Three credit hours.

ADVT 4385 Marketing Management
Prerequisites: senior standing, MKTG 3350. The application of marketing concepts and techniques to the solution of marketing problems, includes product positioning, product and product line, price, channels of distribution, advertising, and personal selling. The case study method is emphasized. Three credit hours.

ADVT 4395 Cooperative Education I
Prerequisites: senior standing, major in marketing or advertising, completion of at least nine hours of upper-level marketing or advertising courses with a grade of C or greater, cumulative GPA of 2.50, and consent of a sponsoring faculty member prior to registration. Designed to complement and extend the classroom learning experience through the application of marketing theories and concepts in a professional work environment. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities are dependent upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. Course is accepted as elective credit in the marketing or advertising/public relations major. Course is offered on a credit/no credit basis only. Three credit hours.

ADVT 4396 Cooperative Education II
Prerequisites: credit for the completion of MKTG 4395 and consent of a sponsoring faculty member prior to registration. Designed as the continuation of MKTG 4395, this course provides an opportunity in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities are dependent upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is not accepted as elective credit in the marketing or advertising/public relations major. Course is offered on a credit/no credit basis only. Three credit hours.

ADVT 4310 Public Relations
Prerequisite: ADVT 3300. History and development of public relations as an influential part of the management function is discussed, including the public relations process of fact finding, opinion research, planning, communicating, and evaluating. Decision making and application of management policy as it relates to the organization’s various publics is covered. Three credit hours.

ADVT 4320 Advertising Campaign II
Prerequisite: ADVT 3300. Writing advertising copy and creating visual graphics are covered, along with production techniques used in newspaper, magazine, radio, television, outdoor, and other media. Different creative philosophies are studied, and creative consistency with the marketing strategy based on research is stressed. Three credit hours.
ADVT 4370 International Promotion Management and Public Relations
Prerequisite: MKTG 3350. Promotion and public relations planning and strategy for management decision making for business, industry, institutions, and organizations involved in multinational activities. The effects of fact findings, planning, communicating, and evaluating promotion and public relations programs; the communications challenges in implementing programs, caused by language, social, moral, economic, educational, and political differences. Three credit hours.

ADVT 4290, 4390 Independent Study
Prerequisites: prior consent of instructor, marketing or advertising/public relations major or minor with a minimum 3.00 GPA. Two or three credit hours.
COLLEGE OF EDUCATION

DKSN 323, 569-3113, 569-8694 (fax)
Professor Angela M. Sewall, Dean
Professor Candace W. Burns, Associate Dean

http://www.ualr.edu/coedept/

The College of Education (COE) provides professional course work for pre-service and in-service teachers and other personnel. Satisfactory completion of a prescribed course of study in early childhood education, or middle childhood education leads to a baccalaureate degree in education and meets initial professional licensure requirements. The College offers a minor in secondary education as part of UALR’s programs of study for students pursuing careers as secondary teachers in the areas of art, music, foreign languages, social studies, language arts, mathematics, physical science/earth science, life science/earth science, or integrated physical education and health. See “Secondary Teacher Licensure” on page 45 for more information.

The COE also provides course work to prepare personnel in the fields of rehabilitation of the blind, interpreting for the deaf, counselor education, rehabilitation counseling, reading, special education, gifted education, educational administration and higher education. In addition, the college provides services to the UALR community in such areas as developmental skills and various educational programs for children and youth.

An associate of arts (AA) degree and a bachelor of arts (BA) degree are offered in interpretation: ASL/English, and the college offers bachelor of science in education (BSE) degrees in early childhood, and middle childhood, and a minor in secondary education. In addition, a student with a degree in early childhood can add on a middle childhood license by completing additional coursework.

At the graduate level the college offers a master of arts (MA), a master of education (MED), an education specialist (EdS), and a doctor of education (EdD).

The college consists of these units: Departments of Teacher Education, Educational Leadership, Counseling, Adult and Rehabilitation Education, the Center for Applied Studies in Education, and the Center for Developmental Skills.

Programs in the college are accredited by the National Council for Accreditation of Teacher Education (NCATE).

Conceptual Framework, Mission, and Goals

The COE is committed to the preparation of teachers, counselors, administrators, interpreters for the deaf, rehabilitation professionals, and professionals in higher education as lifelong learners in their respective fields of specialization. The vision of the COE is leaders in learning as demonstrated through its conceptual framework which emphasizes communication, specialized expertise, and professional development.

The mission of the COE is to promote and strengthen the professional development of individuals concerned with education and human development in a variety of settings such as schools, colleges, and universities, private and corporate organizations, and government agencies. The COE strives to develop professionals who use state-of-the-art methodologies and technologies to serve.

A primary goal of the COE is to offer professional training in various education fields.

The interpreting for the deaf program prepares individuals in the field of deafness who wish to specialize in interpreting and transliterating for the deaf or hearing impaired. Training is offered in a variety of interpreting settings. UALR provides a core curriculum program of general education and specialized instruction in American Sign Language and signed English systems. Extensive studies in the areas of deafness; the profession of interpreting; the deaf community and deaf culture; and the physiology of deafness are included in the associate arts curriculum.

The teacher education programs prepare highly qualified individuals for careers as professional educators. To do this UALR prepares teacher candidates to acquire the knowledge, dispositions and skills identified by national specialized professional associations such as the national Middle School Association and those related to Arkansas’ principles of licensure for teachers.

- **Principle 1.** The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches, can create learning experiences that make these aspects of subject matter meaningful for students and can link the discipline(s) to other subjects.
- **Principle 2.** The teacher plans curriculum appropriate to the students, to the content, and to the course objectives.
- **Principle 3.** The teacher plans instruction based upon human growth and development, learning theory, and the needs of students.
- **Principle 4.** The teacher exhibits human relations skills which support the development of human potential.
- **Principle 5.** The teacher works collaboratively with school colleagues, parents/guardians, and the community to support student’s learning and well being.

In addition to professional training, the college offers a variety of service and activity courses to the UALR community. Finally, the college supports service, research, and development projects in several areas through the Center for Applied Studies in Education, the Center for Developmental Skills, the Student Support Services Program, the UALR Reading Program, the Summer Laureate Program/University for Youth, and the International Laureate Program.

In addition to the goals of the teacher education program, the faculty of the College of Education is committed to the broader goals of teaching, University and public service, and research. Because of UALR’s urban orientation, the college has a special responsibility to serve the central Arkansas metropolitan area. The faculty is committed to assist in
Application for Admission to the BSE in Early Childhood Education

The following are minimum criteria for consideration for admission to the program.
All applicants must:
1. Be formally admitted to UALR
2. Have completed RHET 1311 and 1312 English Composition and SPCH 1300 with a grade of C or greater; have completed MATH 1315 or 1302 (see advisor) with a grade of C or greater
3. Have completed at least 30 hours with an overall degree plan cumulative GPA of 2.65 or greater
4. Submit official Praxis I (formerly called PPST) scores of at least 171 in Mathematics; 172 in Reading; 173 in Writing
5. Demonstrate interest and motivation to work with children through past experiences (such as employment related to children or volunteer work with children). Students who would like assistance in identifying appropriate volunteer experiences should contact the Department of Teacher Education for advisement, or talk with the Office of Campus and Community Partnerships
6. Submit a complete application package to the Program Coordinator and receive a letter informing them that they have been admitted to the program and have authorization before registering for any Block I course.

Admission

Admission decisions are the responsibility of the program’s Admissions Selection Committee.

Once admitted, students are required to maintain a 2.65 grade point average, with at least a C in all professional courses (this includes all courses associated with the licensure/degree plan). In addition, students’ professional behaviors, content knowledge, and classroom performance will be evaluated throughout the program.

Successful completion of the licensure program is not based solely on the number of course credits, but requires demonstration of specified professional knowledge, skills, and behaviors.

While a student may require additional time to meet some performance expectations, the faculty may limit that time and reserves the right to remove a student from the licensure program should appropriate progress not be demonstrated.

Application for Admission to the BSE in Middle Childhood Education

The following are minimum criteria for consideration for admission to the program.
All applicants must:
1. Be formally admitted to UALR
2. Have completed RHET 1311 and 1312 English Composition and SPCH 1300 with a grade of C or greater; have completed MATH 1315 or 1302 (see advisor) with a grade of C or greater
3. Have completed at least 50 hours with an overall degree plan cumulative GPA of 2.65 or greater
4. Submit official Praxis I (formerly called PPST) scores of at least 171 in Mathematics; 172 in Reading; 173 in Writing. Applications may be submitted prior to receiving scores; however, interviews for admission will not be scheduled until scores are received.
5. Demonstrate interest and motivation to work with children through past experiences (such as employment related to children or volunteer work with children). Students who would like assistance in identifying appropriate volunteer experiences should contact the Department of Teacher Education for advisement, or talk with the Office of Campus and Community Partnerships
6. Submit a complete application package to the Licensure Advisor and receive a letter informing them that they have been admitted to the program and have authorization before registering for any Block I course.

Admission

Admission decisions are the responsibility of the program’s Admissions Selection Committee.

Students whose applications are complete and meet the criteria listed above will be contacted to make appointments for:
1. Writing an essay demonstrating grammatical English and composition skills.
2. An interview with an Admissions Selection Committee, which will focus on oral skills and the selection of teaching as a profession.

Program Admission Status

Regular admission is granted when all admissions requirements have been satisfied. Students may have specific conditions applied to their enrollment (based on the oral interview and written essay) which must be addressed within a specified time limit. Students may enroll in professional courses up to that time limit, when their status will be reassessed with respect to the stipulated conditions. If no stipulations have been specified, regular status will continue as long as standards are maintained.

Retention

Once admitted, students are required to maintain a 2.65 grade point average, with at least a C in all professional courses (this includes all courses associated with the licensure/degree plan). In addition, students’ professional behaviors, content knowledge, and classroom performance will be evaluated throughout the program.

Successful completion of the licensure program is not based solely on the number of course credits, but requires demonstration of specified professional knowledge, skills, and behaviors.

Once the student has begun the program, periodic evaluations will assess progress. Failure to progress satisfactorily might result in a student being removed from the program. While a student may require additional time to meet some performance expectations, the faculty may limit that time and reserves the right to remove a student from the licensure program should appropriate progress not be demonstrated.

Legal Requirements

Students who have been formally admitted to the program must complete the following requirements:

For the first field placements:
1. Proof of liability insurance. This insurance is provided through the School Workers Defense Program or by joining the Student Arkansas Education Association (SAEA)
2. A negative tuberculosis test. (Health Card is available through the Arkansas Department of Health)
3. Criminal records check: state civil record check must be completed

Before being recommended for licensure:
1. Criminal records check: state civil record check and FBI record check. The student is responsible for the fees associated with these checks
2. Praxis exams in Principles of Teaching and Learning and in their area of specialization. Scores must meet Arkansas state standards

Admission to the Internship

Students must apply for the internship for the fall semester by March 1, and for the spring semester by October 1. Approval for admission to the internship is made by the Admission, Retention, and Exit Committee. Admission requirements include:

1. Admission to the teacher education program and retention of all standards required for admission to the program
2. Completion of, or enrollment in, all required courses in the major teaching field and professional education
3. Being within 12 credit hours or fewer of graduation after completing the internship. Students in the Middle Childhood Program may enter the first semester of student teaching with 24 or fewer hours remaining to be completed after the conclusion of the internship
4. Approval of advisor and appropriate departmental chairperson
5. Possession of insurance against liability for no less than $100,000. This insurance is provided through the School Workers Defense Program or by joining the Student Arkansas Education Association (SAEA)
6. Provision of evidence of a recent negative TB skin test or X-ray
7. Agreement not to register for more than four credit hours per semester in evening, correspondence, or weekend courses beyond those required in the internship block

If admission is denied, an appeal may be made to the college’s Admission, Retention, and Exit Committee. Decisions of this committee are final.
Teacher Licensure

Applicants for an initial teaching licensure must provide to the Office of Teacher Licensure, a completed license application form, an official UALR transcript showing the date the degree was granted, official transcripts from all other institutions attended, and appropriate Praxis II scores, demonstrating passage of both content and pedagogical components.

Persons desiring licensure as teachers of art, business education, English, foreign language (French, German, Spanish), mathematics, music, physical/earth science, life/earth science, social studies, or speech/drama may complete the MEd program requirements given in the UALR Graduate Catalog, or may complete the undergraduate program for the preparation of secondary teachers. See "Minor in Secondary Education" on page 46.

For more information concerning licensure, contact the Professional Licensure Division of the Arkansas Department of Education.

State Requirements

Students in the early childhood education (birth through Grade 4) and middle childhood education (Grades 4-8) programs are required to take a course in world cultures, HIST 1311 and 1312, and POLS 1310 or US History 2311 or 2312. They also must complete a course in Arkansas History. These courses are included in the UALR core curriculum.

Students must complete the program of study and meet all other state regulations to be eligible for Arkansas Licensure.

Community College Transfers

Students transferring to UALR from two-year colleges are subject to these provisions:
1. The UALR College of Education generally accepts transfer credit for education courses comparable to those taught at the freshman (1000) and sophomore (2000) levels at UALR. (See “Transfer Students” on page 13 for requirements for admission of transfer students)
2. Professional education course work (i.e., courses comparable to the early and middle childhood education sequence) need not necessarily be repeated. The student may, with the approval of the advisor, the program coordinator, and the dean, validate the course work by making a B or greater on an examination equivalent to a final examination in each course

These provisions also apply to transfer work from four-year institutions that are neither accredited by the National Council for the Accreditation of Teacher Education (NCATE) nor approved as teacher education institutions by the state in which they are located.

Applicants who have completed a Associate of Arts in Teaching degree are required to have an overall degree plan GPA of 2.65 or higher, scores on the PRAXIS I that meet UALR’s standards, and must meet all other admission requirements for a B.S.E. degree.

Center for Applied Studies in Education

Professor Bradley; Research Associate Corwyn.

The Center for Applied Studies in Education (CASE) is an independent research and evaluation unit within the College of Education. The Center specializes in research involving education and human service issues. It provides research design; data collection, processing and analysis; statistical support; grant and report writing; program evaluation; and measurement procedures and instrument design services to local, state, and national agencies.

The center’s staff collaborates in research and training with UALR and UAMS faculty and students, as well as with state and national education and human service organizations. Current grants and contracts provide research and evaluation support to national government agencies and the state educational community. The CASE faculty participates in teaching undergraduate and graduate courses through the Department of Teacher Education.

Center for Developmental Skills

A associate Professor Carol Snelson, director; Reading Specialist Sue Bowling, Nancy Wool; Counselors Valerie Brown, Augustus Swain; M ath Coordinator Yvonne Denis; M d air Coordinator Yvonne Croston; Lab Technician Ernesto Valdez

The Center for Developmental Skills, located in Administration South 115, provides academic services in reading, study skills, and mathematics for credit and/or on a fee basis. Reading instruction is available through READ 0310 College Reading and 2110 Rapid Reading. READ 2210 College Study Skills is also available for students who have completed 12 semester hours at UALR. Math assistance is offered through tutoring and noncredit math preparation courses. Test preparation materials are available to students preparing for tests such as the ACT, SAT, Praxis I, and GRE. For additional information, call 569-3280.

Student Support Services Program

The Student Support Services program is designed to help eligible students acquire the skills needed for success in college. Methods include tutoring, skill development, and guidance and counseling; with special emphasis placed on developing strategies for succeeding in college and graduating. All services through the Student Support Services program are free and available to any student who lacks adequate preparation and who qualifies under federal guidelines. For additional information, call 569-3280.

Ronald E. McNair Post-Baccalaureate Achievement Program

The purpose of the Ronald E. McNair Post-Baccalaureate Achievement Program is to prepare eligible undergraduate students for doctoral study. Academic support is provided through tutoring, GRE test preparation, a library research skills course, and counseling. Students also receive a stipend while participating in a research project under the guidance of a mentor/mentor. For additional information call 569-3280.

Federal Title II Survey

Six components are identified in Arkansas Title II Regulations for a "well-performing institution," UALR meets all six criteria:
• A summary pass rate of at least 80%
• A content major for secondary education program completers
• Student/Faculty supervision ratio does not exceed 18 to 1
• Number of weeks of student teaching is not less than 12 weeks
• The institution conducts an annual comprehensive unit assessment of teacher preparation.
• The institution is not placed on probation by NCATE

The following institutional report is made available in compliance with section 207F of Title II regarding the performance of the teacher preparation program at UALR for the 2004-2005 cohort of students.

For further information and subject specific pass rates, visit the College of Education web site at http://www.ualr.edu/coedept/titleii.html

Institutional and State Pass Rates

Aggregate Basic Skills: ........................................ 100% / 100%
Aggregate Professional Knowledge: ..................... 100% / 100%
Aggregate Academic Content: ............................. 100% / 100%
Summary Totals and Pass Rate: .......................... 100% / 100%
The Department of Counseling, Adult and Rehabilitation Education (CARE) provides quality educational experiences for a heterogeneous student body at the undergraduate and graduate levels. The department is oriented to meeting the personnel needs of educational institutions and service providers in Arkansas and the nation by offering a strong emphasis on professional education with a practical application in each program. The department also provides community organizations and professional groups with services for persons who are deaf or hard of hearing, persons with visual impairments, and persons with physical disabilities, and houses the Center for Developmental Skills.

The Department of CARE offers two undergraduate degrees and four graduate degrees. The undergraduate degrees are:

- A Bachelor of Arts in Interpretation: ASL/English with a minor in Educational Interpreting (for Interpretation majors only)
- An Associate of Arts degree in Interpretation: ASL/English

An academic minor in Sign Language Studies is designed for students who are not majoring in the Interpretation program. Nine credit hours of American Sign Language may be taken to fulfill the second language requirement.

An academic minor in Educational Interpreting is designed for students who are majoring in the interpretation program.

At the graduate level, a Master of Education in counseling, a master of arts in rehabilitation counseling, a master of education in adult education, and a master of arts degree in rehabilitation for the blind are offered. The rehabilitation degree has two emphasis areas:

- Orientation and mobility instruction for the blind
- Rehabilitation teaching for the blind

A post-masters degree certificate in Rehabilitation Counseling is also offered through the Department of CARE. A certificate in Orientation and Mobility is offered on the master’s level. Consult the UALR Graduate Catalog for more information on the graduate programs.

**Interpreter Education, American Sign Language (ASL)/English**

The Associate of Arts degree requires 63 hours and is designed to develop entry-level interpreting skills for students who are beginning careers in interpretation. The Bachelor of Arts degree requires 124 - 125 hours and is designed to develop mid- to high-level interpreting skills for students who are advancing their careers in interpretation and the field of deafness. Both programs are designed to develop the interpreting skills necessary for interpretation between individuals who are hearing and individuals who are deaf, deaf-blind, or hard of hearing, in the public and private sectors, educational institutions, business and industry, the arts, and in the community at large throughout Arkansas and the country.

Course work provides students with the knowledge of multicultural diversity and interpretation skills necessary for practical application of the theories of second language learning and interpretation. The program includes:

1. Instruction in American Sign Language, an English-based sign system, interpretation theory and process, the deaf community and deaf culture, and the profession of interpreting

2. Beginning and advanced interpretation and transliteration techniques with practice among American Sign Language, spoken English, and an English-based sign system, as well as techniques for interpreting for individuals who are oral, who are deaf-blind, and who are from diverse cultural backgrounds

3. Bicultural and multicultural sensitivity training and techniques for producing linguistic and cultural equivalents

4. Ninety clock hours of supervised practicum in direct communication with individuals who are deaf, deaf-blind, or hard of hearing

5. Three hundred clock hours of supervised internship in interpretation settings (BA degree only)

Practicums in Arkansas may include the Arkansas School for the Deaf, Arkansas Rehabilitation Services, Administrative Office of the Courts, the UALR community, and the community at large. Internship sites may include in-state and out-of-state placements depending on students' abilities and/or interests.

The Interpreter Education Program maintains a sign language laboratory of instructional materials for student use. All American Sign Language and interpreting methods sections require a minimum of one hour of lab per week.

Students must attain an overall GPA of 2.00 in all work attempted at the University and attain a grade of C or greater in each of the ASL and interpretation courses. Courses in the associate of arts and the bachelor of arts degree programs for the Sign Language Proficiency Interview (SCPI), the Mid-America Quality Assurance Screening State Test (QAST), and the Registry of Interpreters for the Deaf, Inc. Certification Test (RID).

**Second Language Requirement for all BA Degrees**

Nine hours of ASL or demonstration of the equivalent proficiency meets the second language requirement for students seeking BA degrees.

**Credit Validation**

Students who have acquired ASL skills before enrolling at UALR may apply for credit for their proficiency by taking the sequel language skill course and earning a grade of B or greater. Students must request retroactive credit from the program coordinator. Up to nine hours of credit may be obtained in this manner. Students may request a language placement test by contacting the program office at (501) 569-3169 to find the level at which they should enroll.

**Admission and Exit Requirements in Interpreter Education**

Students pursing the Associate of Arts degree in Interpretation: ASL/English, must complete three (3) hours of ASL (INTR 1320 American Sign Language I), with a grade of B or greater, or demonstrate equal proficiency (see ASL Placement Test), or obtain permission from the program coordinator (Sherry Shaw, 501-569-3169) before admission to the program. Students must make an appointment with a program advisor for advisement. To complete the AA degree program, students must attain a grade of C or greater in each of the interpretation courses, achieve an Intermediate Level on the Sign Language Proficiency Interview (SCPI), take the state-administered Mid-America Quality...
Assurance Screening Test (QAST) for interpreters, and meet all other associate degree requirements. See “Associate Degree Requirements” on page 25. Required Benchmark: An SCPI Intermediate Level is required for continuation into the last semester of interpreting courses (INTR 3362, 3364, 3366, which are co-requisite courses).

Students declaring the Bachelor of Arts degree in Interpretation: ASL/English as a major must complete six (6) hours of American Sign Language courses (INTR 1320 and INTR 1321) with grades of B or greater in each course, or demonstrate equal proficiency, or obtain permission from the program coordinator for admission to the program. Students must attain an overall GPA of 2.0 in all work attempted at UALR, a grade of C or greater in each of the interpreting courses, demonstrate proficiency or complete nine (9) hours of second language requirements (ASL satisfies the language requirement), achieve an SCPI Intermediate Level, take the state-administered Mid-America Quality Assurance Screening Test (QAST) for interpreters again, and must meet all other baccalaureate degree requirements. See “Baccalaureate Degree Requirements” on page 25. Required Benchmarks: An SCPI Intermediate Level is required for continuation into the beginning interpreting courses (INTR 3362, 3364 and 3366 which are co-requisite courses) and a QAST Level I/I is required prior for continuation into the intermediate interpreting course (INTR 3368) which has a co-requisite course, INTR 3370 (Ethical Standards and Practices for Interpreters).

### Minor in Educational Interpreting
(Interpretation Majors Only)

The minor in Educational Interpreting requires 19 hours. The program is designed to provide students majoring in Interpretation with the special skills necessary for interpreting in K-12 educational settings. Required courses include INTR 3346, 3350, 4384, AUSP 3362, ECED 2400, and TDHH 4301.

### Minor in Sign Language Studies
(Non-interpretation Majors Only)

The minor in Sign Language Studies requires 18 hours. The program is designed to provide a basic knowledge of American Sign Language and English-based sign language systems, the profession of interpreting, and the field of deafness. Required courses include INTR 1320, 1321, 2320, 2330, 2342, and 4340. Students interested in becoming professional interpreters for persons who are deaf, deaf-blind, or hard of hearing will need additional course work beyond the requirements of this minor.

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### BA in Interpretation: ASL/English

**Core Requirements**<sup>1</sup> (44 hours)

**Prerequisite Courses** (6 hours)
- INTR 1320 American Sign Language I
- INTR 1321 American Sign Language II

**Sign Language Studies** (9 hours)
- INTR 2320 American Sign Language III
- INTR 2321 American Sign Language IV
- INTR 2330 Manually Coded English in Educational Settings

**Foundation Courses** (9 hours)
- INTR 2342 Introduction to Interpreting
- INTR 3344 Interpretation Theory and Process
- INTR 4340 Deaf Culture

**Interpreting Courses** (23 hours)
- INTR 2360 Oral Transliterating
- INTR 3358 Interpreting for Persons who are Deaf-Blind
- INTR 3360 Interpreting Contextually Bound English Lexicon
- INTR 3362 Interpreting in Specialized Settings
- INTR 3364 Sign to Voice Interpreting/Transliterating
- INTR 3366 Voice to Sign Interpreting/Transliterating
- INTR 3368 Intermediate Interpreting/Transliterating
- INTR 3370 Ethical Standards and Practices for Interpreters
- INTR 4380 Advanced Transliteration: English - English
- INTR 4382 Advanced Interpretation: ASL - English

**Practicum and Internship Courses** (12 hours)
- INTR 2370 Practicum
- INTR 4970 Internship

**Electives** (6 hours)
- INTR 3330 Fingerspelling
- Or any electives offered at the University

**Minor Courses** (18 hours)
- Minor in Educational Interpreting or any other academic minor offered at the University

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### AA in Interpretation: ASL/English

**Core Requirements**<sup>2</sup> (15 hours)

**Prerequisite Course** (3 hours)
- INTR 1320 American Sign Language I

**Sign Language Studies** (15 hours)
- INTR 1321 American Sign Language II
- INTR 2320 American Sign Language III
- INTR 2321 American Sign Language IV
- INTR 2330 Manually Coded English in Educational Settings
- INTR 3330 Fingerspelling

**Foundation Courses** (9 hours)
- INTR 2342 Introduction to Interpreting

**Interpreting Courses** (18 hours)
- INTR 3344 Interpretation Theory and Process
- INTR 4340 Deaf Culture
- INTR 2360 Oral Transliterating
- INTR 3358 Interpreting for Persons who are Deaf-Blind
- INTR 3360 Interpreting Contextually Bound English Lexicon
- INTR 3362 Interpreting in Specialized Settings
- INTR 3364 Sign to Voice Interpreting/Transliterating
- INTR 3366 Voice to Sign Interpreting/Transliterating
- INTR 3368 Intermediate Interpreting/Transliterating
- INTR 3370 Ethical Standards and Practices for Interpreters
- INTR 4380 Advanced Transliteration: English - English
- INTR 4382 Advanced Interpretation: ASL - English

**Practicum Course** (3 hours)
- INTR 2370 Practicum

**Electives** (3 hours)
- Or any electives offered at the University

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1. See “Core Requirements for Bachelor Degrees” on page 27.
2. See “Associate Degree Requirements” on page 25.
INTR 1320 American Sign Language I
An elementary course in American Sign Language (ASL) using a natural language approach to introduce culturally appropriate signed concepts related to the immediate environment. Common communicative events and interactions are utilized to acquire a basic working vocabulary and grammar. Includes development of appropriate linguistic/cultural behaviors and awareness of respect for deaf culture. Receptive and expressive skills are fostered through interactive ASL lessons without voice. Three credit hours.

INTR 1321 American Sign Language II
Prerequisite: INTR 1320 with a grade of C or greater. An intermediate ASL course progressing from common, concrete communicative events and interactions to language about abstract ideas. Emphasis is on the comprehension and production of increasingly complex linguistic structure focusing on conversations and conversational expressions. More complex receptive and expressive skills are fostered through interactive ASL lessons without voice. Three credit hours.

INTR 2320 American Sign Language III
Prerequisite: INTR 1321 with a grade of C or greater. A conversational ASL course focusing on specific grammatical and cultural topics. Emphasis is on the development of fluent conversational skills utilizing grammatical non-manual signals and markers. Students will learn how to narrate, describe, compare, and comment. Narratives of native language users are utilized for beginning text analysis of ASL. Interactive ASL lessons without voice lead to expanded vocabulary mastery and fluency. Three credit hours.

INTR 2321 American Sign Language IV
Prerequisite: INTR 2320 with a grade of C or greater. Corequisite: INTR 3344. An advanced ASL course focusing on performance cultural and linguistic competencies ranging from informal to formal communication events. Emphasis is on greater fluency in idiomatic language usage and mastery of vocabulary and syntax. Linguistic competence is enhanced through interactive discourse with native language users. Topics will include: working with children, adolescents, their parents, and educators; sign systems used in educational settings; educational goals and language policies; certification issues; working conditions; analyzing classroom interpreting tasks; and the knowledge, skills, and attitudes needed for educational interpreting. Three credit hours.

INTR 2330 Manually Coded English in Educational Settings
Prerequisite: INTR 1321. Designed to expose students to a variety of signed English systems. Students learn the rules governing the selection of signs and the rationale for sign language systems in the educational setting. Focus is on learning using Exact English (SEE II) as adapted by educational systems and state schools for the deaf. Three credit hours.

INTR 2342 Introduction to Transliterating
Designed to provide students with a working knowledge of the profession of interpreting, including the Code of Ethics, certification criteria, the roles and responsibilities of an interpreter, and compensation. Discussions of the role of the interpreter in a variety of professional settings including educational, medical, legal, the performing arts, counseling, and rehabilitation. Three credit hours.

INTR 2360 Oral Transliterating
Restricted to students who have been admitted to the Interpretation program. A study of the mechanics of and skills needed for interpreting for persons who are deaf and use the oral approach. Students will develop and practice appropriate techniques necessary for verbatim transliterating and voicing, and paraphrasing in a variety of interpreting settings. Three credit hours.

INTR 2370 Pracitum
Prerequisite: INTR 2320 or prior permission of the instructor. Restricted to students who have been admitted to the Interpretation program. Exposure and experience in using sign language/oral skills in settings with individuals who are deaf or hard of hearing. Offers students opportunities to enrich and reinforce knowledge of syntax and culture for greater linguistic mastery. Three credit hours.

INTR 3268 Intermediate Interpreting/Transliterating
Prerequisites: Associate of Arts degree in Interpretation or equivalent, QAST Level I/II or equivalent, INTR 3364 and 3366, or permission of program coordinator. Restricted to students who have been admitted to the Interpretation program. An intermediate level interpreting and transliterating skills course designed to enhance both linguistic competencies and cultural appropriateness. Discussion of the role and responsibilities of interpreters and consumers, as well as ethical questions and dilemmas encountered during professional interpreting experiences. Includes practice of skills and process tasks of increased complexity with unplanned and planned language samples, such as dialogues, monologues, interviews, and lectures from a variety of interpreting settings. Two credit hours.

INTR 3330 Fingerspelling
Prerequisite: INTR 1320. A course designed to develop expressive and receptive fingerspelling skills. Emphasis will be on whole-word and phrase recognition, as well as on reading fingerspelling embedded in signed sentences. Expressive skills will focus on attainment of normal speed, clarity, and fluency. Extensive interactive drills with the instructor/student(s) will enhance receptive and expressive speed and skill. Videotaped fingerspelling lessons of varying speeds embedded in sentences will be utilized for practice of receptive comprehension. Three credit hours.

INTR 3370 Ethical Standards and Practices for Interpreters
Prerequisite: INTR 1320. Designed to teach students the ethical standards and expressive and receptive skills necessary to function effectively as interpreters. Emphasizes ethical issues in the profession and the codes of ethics. Six credit hours.
**Graduate Program in Adult Education**

The Department of Counseling, Adult and Rehabilitation Education also offers a master of education in adult education degree. It encompasses a broad field including many interests and competencies and is not limited to a single discipline, institution, program, or agency. The overall purpose of the program is to prepare present and future leaders for positions of responsibility in diverse educational contexts.

The master of education in adult education is a rigorous and intensive professional development experience. The program may lead to Arkansas teacher licensure or may be tailored to meet other professional needs and goals.

**Courses in Adult Education (ADED)**

**ADED 4301 Psychology of Adult Learning**
Prerequisite: course work in adult education. Examination of the research related to adult learning and development as it can be applied to the practice of adult education. Adult learning theories of the cognitivists, behaviorists, and humanistic; stages and basic theories of development. Dual-listed in the UALR Graduate Catalog as ADED 5301. Three credit hours.

**ADED 4303 Teaching Adults**
Prerequisite: course work in adult education. Examination of the teaching/learning process from planning to presentation. Micro-teaching involving the integration of adult learning principles will be conducted. Dual-listed in the UALR Graduate Catalog as ADED 5303. Three credit hours.

**ADED 4304 Methods and Materials in Adult Education**
Prerequisite: course work in adult education. An overview of the methods used to create an adult learning environment and techniques that are considered most effective. A process used for evaluating adult education materials will also be considered. Dual-listed in the UALR Graduate Catalog as ADED 5304. Three credit hours.
DEPARTMENT OF EDUCATIONAL LEADERSHIP

The Department of Educational Leadership serves as an academic department housing five graduate programs and as a supporting unit for all programs within the College of Education in the areas of historical, philosophical, psychological, and sociological foundations of education, educational research, educational statistics and instructional technology.

Courses offered in this department address the study of educational administration, educational psychology, educational research, history and philosophy of education, evaluation and measurement, statistics, instructional technology, administration and teaching in higher education, gifted and talented education, and deaf and hard of hearing education.

Technical support is provided by the instructional technology production laboratory and the microcomputer laboratory within this department. These laboratories are production facilities maintained during working hours for UALR faculty and students.

Courses in Educational Foundations (EDFN)

EDFN 1190 Career Planning and Life Options
A systematic approach to developing decision-making skills and an orientation to the world of work. The focal point of the course is the student and his or her goals. Emphasis is on clarifying and formulating realistic career goals and an appropriate career plan and strategy to achieve these goals. Credit/no credit. One credit hour.

EDFN 2300 American Education
Prerequisite: sophomore standing. The philosophical, sociological, psychological, and historical foundations of American education, especially in public schools. The course will provide opportunities for each student to develop an official certification/degree plan and to apply for admission to the teacher education program. Three credit hours.

EDFN 3304 Assessment in the Middle School Curriculum
Study of available assessment methods and the integration of these methods in planning, modifying, and evaluating instruction, and in reporting outcomes to varied constituencies. After completing this course, students will meet basic assessment competencies as outlined in the Arkansas Principles for Licensure for Beginning Teachers and The Standards for Teacher Competence in the Educational Assessment of Students (1990). Three credit hours.

EDFN 3320 Introduction to Educational Psychology
Prerequisite: PSYC 2300. Applications of psychological principles to the learning and teaching processes; emphasis on learning, cognitive development, social development, discipline, intelligence, evaluation, and measurement. Three credit hours.

EDFN 4205 Diagnostic and Evaluative Procedures in Education
A study of fundamental statistical concepts and their use in understanding standardized test results. Emphasis on the exploration of qualitative methods and evaluating and reporting progress. Two credit hours.

EDFN 4158, 4258, 4358, 4458 Educational Foundations Workshop
Designed to strengthen offerings in education and meet the needs of teachers for further training at the in-service level. One, two, three, or four credit hours.

EDFN 4100, 4200, 4300, 4400, 4500 Independent Study in Educational Foundations
In-depth study of topics in educational foundations for preservice elementary teachers, junior or senior high school teachers, or adult education teachers. One, two, three, four, or five credit hours.

Courses in Teaching Students who are Deaf or Hard of Hearing (TDHH)

TDHH 4301 Foundations of Education for Deaf and Hard of Hearing Students
This foundations course is a broad-based introductory course to the profession of teaching students who are deaf or hard of hearing. This course articulates the historical background, philosophical approaches, and current trends, problems, and issues in the education of the deaf and hard of hearing. An overview of the psychological, emotional, and educational problems of the deaf and hard of hearing is included. Knowledge of contemporary educational processes and programs for deaf or hard of hearing infants, children, and adolescents is incorporated into the course content. Dual-listed in the UALR Graduate Catalog as TDHH 5301. Three credit hours.
The Department of Teacher Education offers two bachelor of science in education (BSE) degrees, the BSE in early childhood education and the BSE in middle childhood education which includes specialties in math/science and social studies/language arts. A minor in secondary education is offered through the teacher education department as well. See “Secondary Teacher Licensure” on page 45 for details about secondary education licensure content areas.

The department strives to provide balanced teacher education programs that embody institutional and college goals, the Arkansas Department of Education teacher licensure requirements, guidelines of learned societies and professional associations, and contemporary educational philosophies and practices.

The department also offers master of education degrees (MEd) in early childhood education, middle childhood education, reading, secondary education, and special education. An education specialist (EdS) degree in elementary education: reading recovery is also available. More information about the graduate level programs may be obtained from the department or from the UALR Graduate Catalog.

Exit Requirements in Teacher Education

In order to graduate with a degree in teacher education, students must meet all general graduation requirements and earn a grade of C or greater in all professional education courses. Documentation of successful completion of all required Praxis II examinations must be provided as a condition for graduation from an undergraduate early childhood and middle childhood program. Students must submit complete Praxis II exam scores to the College of Education as documentation of their successful completion of these tests.

Arkansas’ definition of “program completers” for Title II reporting purposes has been changed. It requires completion of a degree program and successful performance on all required sections of required tests.

Early Childhood Education Degree Requirements

Core Requirements (44 hours)

PSYC 2300 Psychology and the Human Experience and
SOCI 2300 Introduction to Sociology are recommended choices in the core curriculum

Floating Block (17 hours)

Second Language, ASL, or ESL Requirement

HCSC 3211 Health and Safety in Early Childhood
SOCI 3346 Sociology of the Family
3 hours of Arkansas History

Introduction to the Profession (13 hours)

ECED 2200 Field Experience I
ECED 2300 Introduction to Early Childhood Education
ECED 2301 Language and Literature and Literacy I
ECED 2400 Child Growth and Development
TCED 1104 Introduction to K-12 Computing

Children in Groups (15 hours)

ECED 3200 Field Experience II
ECED 3300 Guiding Young Children

1. See “Core Requirements for Bachelor Degrees” on page 27.
2. See “Second Language Requirement” on page 27.
Middle Childhood Education Specialty in Social Studies/Language Arts

Core Requirements (44 hours)¹

ANTH 2316 Cultural Anthropology
or GEOG 2312 Cultural Geography
ENGL 2337 World Literature
or ENGL 2338 World Literature Themes
HIST 2311 U.S. History to 1877
or HIST 2312 U.S. History since 1877

Second Language Requirement (6 hours)²

Program Requirements (13 hours)
MATH 3383 Mathematics for Middle School
MATH 3384 Concepts in Geometry
MATH 4380 Concepts in Probability and Statistics
IGSC 4401 Integrated Science Methods or comparable course

Social Studies/Lang. Arts Specialty (21 hours)
RHET 3301 Editing for Usage, Style, and Clarity
POLS 1310 American National Government
3 hours literature
3 hours rhetoric and writing
HIST 4355 History of Arkansas
3 hours economics
GEOG 1311 or INTS 2301

Orientation (3 hours)
TCED 1200 Orientation to Teaching

Middle Childhood Education Specialty in Math/Science

Core Requirements¹ (44 hours)

MATH 1302 College Algebra
ENGL 2337 World Literature
or ENGL 2338 World Literature Themes
HIST 2311 U.S. History to 1877
or HIST 2312 U.S. History since 1877
or POLS 1310 American National Government

Second Language Requirement² (6 hours)

State of Arkansas Department of Education Requirement (3 hours)
HIST 4355 History of Arkansas
Math/Science Specialty - Math (15 hours)
MATH 1303 Trigonometry
MATH 3383 Mathematics for Middle School
MATH 3384 Concepts in Geometry
MATH 4380 Concepts in Probability and Statistics
MATH 1451 Calculus I
or MATH 1342 Business Calculus
MATH 2310 Discrete Mathematics (optional)

Math/Science Specialty - Lab Science (16 hours)
IGSC 4401 Integrated Science Methods or comparable course
8 additional hours of core laboratory science in two departments not already selected to fulfill core lab science requirement.

¹. See “Core Requirements for Bachelor Degrees” on page 27.
². See “Second Language Requirement” on page 27.

Introduction to the Profession (14 hours)
MCED 3105 Field Experience I
MCED 3301 Middle Childhood Education, Family, and the Community
MCED 3303 Middle Childhood Curriculum and Planning
MCED 3402 Middle Childhood and Early Adolescent Development and Learning
EDFN 3304 Assessment in the Middle School Curriculum

Curriculum Applications (13 hours)
MCED 3240 Field Experience II
MCED 3310 Middle Level Literacy and Literature
MCED 3320 Integrating Curriculum: Language Arts and Social Studies
MCED 3330 Integrating Curriculum: Science and Mathematics
TCED 3250 Computer Applications in Middle School

Professional Practicum I (11 hours)
MCED 4120 Licensure Seminar
MCED 4301 Internship I
MCED 4310 Middle Level Content Literacy
MCED 4430 Classroom Management

Professional Practicum II (11 hours)
MCED 4303 Professional Seminar
MCED 4502 Internship II
TCED 4320 Interactive Technology for Middle School

4 additional hours of science

Orientation (2 hours)
TCED 1200 Orientation to Teaching
(must test out of or take TCED 1104 Introduction to K-12 Computing)

Introduction to the Profession (14 hours)
MCED 3105 Field Experience I
MCED 3301 Middle Childhood Education, Family, and the Community
MCED 3303 Middle Childhood Curriculum and Planning
MCED 3402 Middle Childhood and Early Adolescent Development and Learning
EDFN 3304 Assessment in the Middle School Curriculum

Curriculum Applications (13 hours)
MCED 3240 Field Experience II
MCED 3310 Middle Level Literacy and Literature
MCED 3320 Integrating Curriculum: Language Arts and Social Studies
MCED 3330 Integrating Curriculum: Science and Mathematics
TCED 3250 Computer Applications in Middle School

Professional Practicum I (11 hours)
MCED 4120 Licensure Seminar
MCED 4301 Internship I
MCED 4310 Middle Level Content Literacy
MCED 4430 Classroom Management

Professional Practicum II (11 hours)
MCED 4303 Professional Seminar
MCED 4502 Internship II
TCED 4320 Interactive Technology for Middle School

College of Education

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Courses in Early Childhood Education (ECED)

ECED 2200 Field Experience I
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2400. This field experience will a) acquaint students with a variety of preschool and kindergarten group experiences, and b) provide a nine-week experience in a specific preschool/kindergarten classroom. Students will be oriented to the structure of a school district, the school, and the classroom setting. Concurrent enrollment in ECED 2400 will be required. Students may assign class time to students during the nine-week classroom placement. Two credit hours.

ECED 2300 Introduction to Early Childhood Education
Prerequisites: admission to early childhood education program and completion of the Orientation to Teaching seminar. Students are introduced to the early childhood education profession. The history and current issues in early childhood education are explored. Infant, toddler, preschool, kindergarten, and primary education are explored from a developmentally appropriate practice perspective. The concepts of inclusion, interaction of family, community, school, and multiculturalism are explored in the context of legal and ethical considerations. Three credit hours.

ECED 2301 Language and Literature and Literacy I
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2200. Students will become acquainted with the value of literature shared in active learning environments, especially designed for young children. The course includes an extensive view of literature written for children from birth through age eight with an examination of developmentally appropriate ways to interact with children about books and stories. Students will develop activities and implement them in a field placement. Three credit hours.

ECED 2400 Child Growth and Development
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2200. Study of environmental and hereditary influences on cognitive, affective, and psycho-motor development of typically and atypically developing children from birth to adolescence. Students consider both predictable developmental patterns and unique patterns due to sexual, socioeconomic, cultural, and normal variations in inherited characteristics. Students observe, record, and analyze behavior and development of children in an educational setting. Concurrent enrollment in ECED 2200 is required. Four credit hours.

ECED 3200 Field Experience II
Prerequisites: admission to early childhood education program and completion of the Introduction to the Profession semester; concurrent enrollment in ECED 3300, 3301, and 3304. The second field experience is focused on working with children in groups. Students spend one day a week in a classroom with young children. They are expected to complete assignments related to early literacy, mathematics, and guidance. During the experience, they will continue development of their professional portfolio and community resource file. Two credit hours.

ECED 3201 Field Experience III
Prerequisites: admission to early childhood education program and completion of the Children in Groups semester; concurrent enrollment in ECED 3302, MATH 3381, and LANG 3224. This field experience provides an opportunity for students to observe, participate, and teach children. Literacy, mathematics, science, and the creative arts are emphasized in the teaching experience. The use of technology in the classroom and school to plan and teach are highlighted. Students will plan, make necessary educational materials, teach, and reflect on the experience. Two credit hours.

ECED 3300 Guiding Young Children
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2300 and 2400. Students will learn theoretical bases and developmentally appropriate practices in guiding young children toward socialization and self-discipline. They will also learn how to design and maintain effective learning environments in a multicultural setting. Students will apply guidance strategies in field placement and design a developmentally appropriate guidance and classroom management plan. Three credit hours.

ECED 3301 Language, Literature, and Literacy II
Prerequisites: admission to early childhood education program and completion of the Introduction to the Profession semester. Literacy I focuses on the foundations of emergent and early literacy in a natural learning environment for preschool through early primary. Emphasis will be given to learning to teach through the components of a balanced literacy program with special attention placed on designing and managing a literate environment, appropriate book selection, language development activities, and using observational assessment strategies to guide instruction. Three credit hours.

ECED 3302 Language, Literature, and Literacy III
Prerequisites: admission to early childhood education program and completion of the Children in Groups semester. This course parallels Literacy I, but addresses the needs of children at a higher literacy level. Literacy II focuses on the foundations of early and fluent stages of literacy in a natural learning environment for primary through fourth grade children. Emphasis will be given to learning to teach through the components of a comprehensive literacy program with special attention placed on designing and managing literate environments, appropriate book selection, word building activities to promote visual processing strategies, comprehension development, and using observational assessment strategies to guide instruction. Three credit hours.

ECED 3304 Integrated Science: Preschool and Primary
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2200. Students will be acquainted with the standards for science in early childhood developed by the State of Arkansas and by the American Association for the Advancement of Science. Developmentally appropriate content and teaching strategies for preschool and primary grade students and their underlying theoretical bases will be presented. Students will be expected to develop activities and units and to implement them in a field placement. Concurrent enrollment in ECED 3200 is required. Three credit hours.

ECED 4101 Licensure Seminar
Review of program theory and practice. Prepares students for Praxis II examinations. Students must successfully attain the standards set by the Arkansas State Board of Education.

ECED 4301 Internship Seminar I
This seminar is designed to teach advanced strategies in guidance, teaching, planning and professionalism. The course will review material previously covered in the program of study and explore it at a more complex level. Particular attention is focused on the teacher as decision-maker and the link between assessment and pedagogical decision-making. All aspects of the class will ask students to connect the course content to their daily experiences in their internship classroom. A major assignment in the course will be to write detailed lesson plans for the week in their internship when they will be responsible for all classroom planning and teaching. Three credit hours.

ECED 4303 Early Childhood Education: Advanced Curriculum
Prerequisites: admission to teacher education program or consent of instructor. Students develop an extensive kindergarten curriculum guide that emphasizes learning center extension of concept teaching. Theoretical issues in curriculum development are studied. Must be taken during the preprofessional semester. Three credit hours.

ECED 4304 Practicum for Early Childhood Education
Prerequisites: admission to teacher education program or consent of instructor. Students will analyze organization techniques and teaching methods used in early childhood settings. The application of teaching methods and techniques in the development and implementation of lessons in labs that include mainstreamed and multicultural settings. Three credit hours.

ECED 4305 Early Childhood Social Studies
This course provides the opportunity for students to analyze and develop integrated curricula in social studies from a variety of historical and current perspectives, within the context of professional, state and local standards. Students integrate knowledge from the six disciplines of social studies (history, anthropology, sociology, political science, geography, and economics) into the design of a constructivist, inquiry-based social studies curriculum. The course explores ways children come to learn about themselves and others. There is an emphasis on meeting the needs of all children, including attention to diverse linguistic and cultural backgrounds, and different learning abilities and styles.

ECED 4399 Early Childhood Assessment
A study of fundamental observation, assessment, and evaluation concepts and tools. Emphasis placed on both qualitative and quantitative methods of reporting student progress. Principles of classroom test construction, alternative assessment techniques, and measurement strategies at various developmental levels will be addressed. Students will learn to accurately interpret standardized test results and be exposed to ethical and legal considerations surrounding use and reporting of assessment results. Three credit hours.

ECED 4401 Internship Seminar II
Prerequisites: completion of the Teaching the Curriculum semester and simultaneous enrollment in ECED 4601: Internship II. The Professional Seminar follows the student’s completed field experience. Topics include analysis of field experiences; review of legal issues affecting educational practice; preparing for job interviews; preparation for the first teaching year; maintaining a professional portfolio to demonstrate growth; reflecting on personal development; and meeting the Arkansas Teacher Licensure Standards. Concurrent enrollment in ECED 4602 Internship II is required. Five credit hours.

ECED 4600 Internship I
Designed for the student to begin by observation and participation and gradually assume complete responsibility for the classroom. They will plan, teach, and reflect on the experience. Students will prepare for children with special needs. Use all of the resources of the school and exhibition of competence with technology is expected. Six credit hours.

ECED 4601 Internship II
A final field experience for students. They plan, teach, and reflect on the experience. They prepare for special needs children. The students participate in all the activities of the school. They use all of the resources of the school and exhibit competence with technology. Six credit hours.
Courses in Middle Childhood Education (MCED)

MCED 3105 Field Experience I
Prerequisite: admission to the middle childhood teacher licensure program. This field experience will acquaint students with a variety of middle school experiences, and provide a 40 hour experience in a middle school classroom. Students will be oriented to the structure of a school district, the school, and the classroom setting. All concurrent courses in the Introduction to the Profession block will include assignments or specific tasks to be completed by students during the 40 hour classroom placement in this field experience. One credit hour.

MCED 3240 Field Experience II
Prerequisite: admission to the middle childhood teacher licensure program and successful completion of MCED 3105. This field experience will focus on working with students in small groups. Students will spend time in a middle school classroom working with students. Students will be expected to complete assignments related to all concurrent courses during the classroom placement. During this field experience students will continue to develop their professional portfolio and commit to the file. The credit for this education program and completion of RHET1311, 1312; SPCH 1300; HIST 1311, 1312; HIST 2311 or 2312; POLS 1310; a three-hour literature course; a three hour geography course; and completion of the Introduction to the Profession block. This course facilitates the understanding of how to teach social studies and language arts through an integrated approach in the most effective way to children in the middle grades. Instructional techniques that teach students how to involve children in social, interactive learning will be presented. Students will plan for and provide developmentally appropriate hands-on experiences with appropriate materials and the supportive environment necessary for children’s meaningful exploration and discovery and will implement those experiences in a field placement. Students will also be required to conduct assessments of learning. Three credit hours.

MCED 3301 Middle Childhood Education, Family, and the Community
Prerequisite: admission to the teacher education program. Corequisite: MCED 3105. Presents strategies for working with families, state agencies, and community organizations from a middle childhood perspective. Information is provided about the nature, history, and philosophy of middle childhood education; the organization and structure of middle schools; teacher advisory systems; morally responsive teaching; teaching teams; multiculturalism; and diversity. Three credit hours.

MCED 3303 Middle Childhood Curriculum and Planning
Students will be oriented to the scope of the middle grades curriculum, varying patterns of curriculum organization, activities, and transition based teaching and general problem solving for instructional planning assessment and management. Introduction of the materials and various technology media used in teaching at the middle level. Field based experience required. Three credit hours.

MCED 3310 Middle Level Literacy and Literature
Provides the student with a broad perspective of literature and literacy instruction for middle school students with language as a central focus of study. Emphasis on exploring ways of engaging adolescents in meaningful literacy learning. Specific focus on differentiating instruction and integrating adolescent literature and writing throughout the curriculum. Involves preparation and evaluation of assessment and teaching procedures and strategies and a review of background information related to the reading process. Three credit hours.

MCED 3320 Integrating Curriculum: Language Arts and Social Studies
Prerequisite: admission to the middle childhood education program and completion of RHET1311, 1312; SPCH 1300; HIST 1311, 1312; HIST 2311 or 2312; POLS 1310; a three-hour literature course; a three hour geography course; and completion of the Introduction to the Profession block. This course facilitates the understanding of how to teach social studies and language arts through an integrated approach in the most effective way to children in the middle grades. Instructional techniques that teach students how to involve children in social, interactive learning will be presented. Students will plan for and provide developmentally appropriate hands-on experiences with appropriate materials and the supportive environment necessary for children’s meaningful exploration and discovery and will implement those experiences in a field placement. Students will also be required to conduct assessments of learning. Three credit hours.

MCED 3330 Integrating Curriculum: Science and Mathematics
Prerequisites: admission to the middle childhood education program and completion of eight hours of science and nine hours of mathematics. Corequisite: MCED 3240. Emphasizes integrated mathematics and science content and how to teach this content to middle level children. The student should use the content to develop thematic concepts which are implemented through the methodologies of inquiry based, hands-on learning with the use of manipulatives. Students utilize the internet and technology as an integrative tool to develop pedagogical techniques and materials in relation to whole course design with cross-disciplinary focus and active student involvement. Three credit hours.

MCED 3402 Middle Childhood and Early Adolescent Development and Learning
Prerequisite: admission to the middle childhood education program. Corequisite: MCED 3105 Field Experience I. A study of the hereditary and environmental influences on the cognitive, emotional, physical, sexual, and social development of children from birth through adolescence with a special emphasis on their pre- and early adolescent development. The impact of the broader culture and atypical development will also be part of the course’s focus. Students observe, record, and analyze behavior and development of children in an educational setting. Four credit hours.

MCED 4120 Licensure Seminar
A review of educational psychology, assessment, motivation, and student expectations. Classroom scenarios requiring application of teacher decision-making skills and classroom management strategies will be presented. In addition, students will analyze case studies. Prepares students for the Praxis II examination; in order to pass this seminar, students must attain the standard set by the Arkansas State Board of Education.

MCED 4301 Internship I
Prerequisites: admission to middle childhood education program and completion of the Introduction to the Profession and Curriculum Applications semesters. Corequisites: MCED 4310 and 4330. Classroom observation and participation in classroom routines with gradual assumption of complete classroom teaching responsibilities. Students plan, teach, and reflect on the total experience. Students make accommodations for children with special needs. All of the school resources are used, and competence in using technology is required. Three credit hours.

MCED 4303 Professional Seminar
Corequisite: MCED 4602. Part of final semester, Professional Practicum II. Presentations by College of Education faculty and practitioners in the field concerning such topics as legal issues affecting educational practice; family constellations; adolescent misbehavior; behavior analysis; discipline involving logical and natural consequences in place of rewards and punishments; and encouragement. Students participate in discussions of these topics, analyze case studies involving preadolescent children, create a professional portfolio, and submit a senior exit project utilizing interactive technology and solving an identified problem in their professional development school. Students learn how to prepare for job interviews; what to expect the first teaching year; how to maintain a professional portfolio to demonstrate growth; how to reflect on personal development; and what is involved in meeting the Arkansas Teacher Licensure Standards. Four credit hours.

MCED 4310 Middle Level Content Literacy
Emphasis on the development of reading in the content areas for middle school students. Focus on the concepts of developing meaningful literacy experiences for adolescents of all ability levels, with a continued focus on language and literature as an integral part of the curriculum. Involves a study of major theories and current teaching strategies in literacy for adolescents. Evaluation and assessment strategies explored. Three credit hours.

MCED 4430 Classroom Management
Emphasizes fundamental principles underlying middle childhood developmental programs in middle level grades, including creation of and fostering of classroom management techniques and strategies for the design of environments which are conducive to a safe place for teaching, learning, and connecting the community to the school for effective discipline and parental support and involvement. Four credit hours.

MCED 4502 Internship II
Prerequisites: admission to the middle childhood education program and the successful completion of Internship I. Corequisite: concurrent enrollment in TCED 4525. The final field placement course. Students plan, teach, and reflect on the experience. Students 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. Five credit hours.

Courses in Reading (READ)

READ 0310 College Reading
A combined lecture/reading lab course designed to improve reading vocabulary and comprehension strategies needed for success in college. Students required to take this course must complete it satisfactorily before enrolling in RHET 1312 Composition II. A, B, C, NC. Three credit hours.

READ 1310 College Study Skills
Prerequisite: READ 0310 if required. Provides practical instruction in skills needed for success and retention in college. Two credit hours.

READ 1311 Reading for Academic Content
Prerequisite: READ 0310 if required. This course is a combined lecture/reading lab designed to improve reading rate and proficiency.
Courses in Special Education (SPED)

SPED 4214 Early Childhood Special Education Assessment Field Experience
Prerequisite: Admission to the Early Childhood Education Program and eligible for admission to Block III with a 2.65 GPA or greater. 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 into activities in the intervention environment and assessments surrounding health and safety issues, children with health and/or sensory impairments, social development, and challenging behavior. Two credit hours.

SPED 4216 Early Childhood Special Education: Inclusion Field Experience
This is a final experience in a series of supervised field experiences designed for students in the Early Childhood Special Education emphasis. The 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. Two credit hours.

SPED 4301 Education of Exceptional Learners
Prerequisite: PSYC 2300 or consent of instructor. Introduction to the psychological, sociological, philosophical, legal, and educational implications of educating exceptional learners in the mainstream; the role of teachers, professionals, and parents as team members in providing appropriate education and necessary adaptations for exceptional learners. Dual-listed in the ULIR Graduate Catalog as SPED 5301. Three credit hours.

SPED 4102, 4202, 4302 Workshop
Subjects vary. One, two, or three credit hours.

SPED 4306 Methods of Teaching Students with Mild Disabilities
Prerequisite: an introductory course in exceptional learners and/or characteristics of students with mild disabilities. Methods and materials for educating students with mild disabilities in regular and special education environments including behavior management, programming for secondary students with mild disabilities, career education, teacher-made materials, and commercially available materials appropriate for use with students with mild disabilities. Three credit hours.

SPED 4108, 4208, 4308 Independent Study
Prerequisite: consent of the department chairperson. An in-depth study of a selected problem or trend in special education for advanced students. One, two, or three credit hours.

SPED 4311 Behavior Management
Prerequisite: EDFN 2300. Positive approaches to behavior management. Students receive firsthand experience in using behavior analysis in real settings. Dual-listed in the ULIR Graduate Catalog as SPED 5311. Three credit hours.

SPED 4312 Medical Problems in Child Development
Prerequisites: Admission to the Early Childhood Education Program and eligible for admission to Block III with a 2.65 GPA or greater. 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. Graduates are prepared to learn that professional services by health care and other health related professionals are an integral part of the course. Dual-listed in the ULIR Graduate Catalog as SPED 5312. Three credit hours.

SPED 4313 Early Childhood Special Education Assessment
Prerequisites: Admission to the Early Childhood Education Program and eligible for admission to Block III with a 2.65 GPA or greater. The first course in a two-course sequence addressing assessment and early intervention screening and assessment strategies for young children with disabilities, from birth through age 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. Three credit hours.

SPED 4315 Early Childhood Special Education: Methods of Inclusion
Prerequisite: Admission to the Early Childhood Education Program and eligible for admission to Block III with a 2.65 GPA or greater. This is the second course in a two-course sequence addressing intervention strategies for young children with disabilities, from 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 also will be given to methods of including children with disabilities in the general education setting. Three credit hours.

SPED 4317 Introduction to Inclusion in Early Childhood Special Education
Prerequisites: PSYC 1300 or an introductory human development course, admission to the Early Childhood Education Program, and eligible for admission to Block III with a 2.65 GPA or greater; or consent of the instructor. Psychological, Sociological, philosophical, legal, educational implications of educating exceptional learners; necessary adaptations for exceptional learners in the mainstream setting; role of teachers, professionals, parents as team members providing education for exceptional learners. Three credit hours.

SPED 4369 Speech Reading and Auditory Training
Prerequisites: AUSP 3362, 4368, or consent of instructor. A study of auditory and visual speech reception, the assessment and training of residual hearing and visual reception by individuals with hearing loss, and the integration of these skills into the rehabilitation process. Appropriate use of personal hearing aids and group amplification systems in educational settings. Three credit hours.

Courses in Teacher Education (TCED)

TCED 1104 Introduction to K-12 Computing
An organized approach to computing practices for K-12 educators. One credit hour.

TCED 1200 Orientation to Teaching
Provide opportunities for students to observe in educational settings at the early childhood (preschool and primary levels) and middle childhood/early adolescence levels. Acquisition of understanding of the nature of the profession and its responsibilities to determine whether they are prepared to make a commitment to this profession. Students assisted in completing applications to licensure programs during this semester, should they decide to continue. Two credit hours.

TCED 3105 K-12 Technology Integration for the Math/Science Curriculum
A systematic design for integrating electronic instructional technology into the math/science curriculum for early childhood, elementary, middle, and secondary schools. Three credit hours.

TCED 3106 K-12 Technology Integration for Literacy
A systematic design for integrating electronic instructional technology into the literacy curriculum for early childhood, elementary, middle, and secondary schools. One credit hour.

TCED 3250 Computer Applications in Middle School
Prerequisite: TCED 1104. Applications of technology in the educational setting with specific emphasis on integrating, instructional technology into the middle school curriculum. Two credit hours.

TCED 4100, 4200, 4300 Workshop
Prerequisite: consent of instructor (based on student's experience and course work in the educational area). Designed to provide an opportunity for pre-service and in-service teachers to explore areas of interest and prepare educational materials through a workshop format. One, two, or three credit hours.

TCED 4104 Electronic Portfolio Development
Prerequisites: LSTE 3105 and 3106. The technology skills needed to develop an electronic portfolio. Each student required to demonstrate design skills for incorporating audio, visuals, and motion. Each student produces an electronic portfolio utilizing a current computer software program and multimedia techniques to translate or convert that product into language compatible with the World Wide Web. LSTE 4104 is a part of the professional semester of the early childhood education program. Students enrolling in this course must be admitted to the professional semester. Three credit hours.

TCED 4301 Introduction to Instructional Technology
Prerequisite: EDFN 2300. The selection, use, and creation of 10 different types of fundamental media software found in today's educational institutions. The student is required to teach a single unit using media created within the media center laboratory. Three credit hours.

TCED 4320 Interactive Technology for Middle School
The production and application of Interactive Instructional units where the microcomputer is the controlling medium for such peripherals as CD-ROM players and web browsers.

TCED 4600 Clinical Experience/Student Teaching
Prerequisite: 12 credit hours of educational coursework at UALR, admission to the professional semester. Provides supervised experience in school settings during which the student participates in planning classroom activities. During the semester, students return to campus periodically for additional lectures and discussions to refine instructional skills necessary for effective teaching. Six credit hours.
The College of Professional Studies offers programs in the areas of communication, human services, and public affairs. At the undergraduate level the college offers degree programs in audiology and speech pathology, criminal justice, mass communication, social work, and speech communication. The mass communication program also offers a program in professional and technical writing jointly with the Department of Rhetoric and Writing in the College of Arts, Humanities, and Social Sciences. In addition to the baccalaureate programs, the college offers a two-year associate degree in law enforcement and a Reserve Officers Training Program in military science.

On the graduate level there are degree programs in audiology and speech pathology, criminal justice, interpersonal/organizational communication, journalism, public administration, and social work. The college also offers post-graduate certificate programs in marriage and family therapy, nonprofit management, and conflict mediation. These programs are described in the UALR Graduate Catalog.

Each program in the college takes an applied approach to professional training of students and balances the curriculum between the academic and the professional. The college places scholarship into context by making its programs highly practical and relevant to the job market. The college has a strong commitment of outreach to the community. As a professional college, it has opportunities to contribute skills and expertise to serve the economic and community development needs in Arkansas and across the nation. The Institute of Government and MidSOUTH Center provide opportunities for public service. This involves not only extensive faculty involvement but opportunities for student involvement as well. All college programs make extensive use of student internships, residencies, and mentorships to help students gain practical experience while in school.

Most departments in the college offer minors for students who major in another field. Descriptions of minors appear in the descriptions of individual departments.

**Minor in Human Services**

This interdisciplinary minor allows students to learn more about human services through core courses in gerontology, public administration, social work, and a choice of advanced related courses. It also provides background and prerequisite courses needed to enter graduate work in these areas.

The minor in human services requires 18 hours of course work, including GER0 2300, PADM 3331, SOWK 1301, and nine hours to be chosen from across the college with advisement from the dean's office. A copy of the list of possible courses to fulfill these nine hours may be secured from the dean's office, which administers the minor.
The undergraduate program in audiology and speech pathology is a preprofessional program following the guidelines of the American Speech-Language-Hearing Association (ASHA). The undergraduate curriculum by itself does not certify the student to work as a professional. The program offers the degree of bachelor of science in speech pathology. It provides the preprofessional background needed to pursue graduate training, Arkansas Board of Examiner licensing, and ASHA certification in speech-language pathology or audiology.

The department offers a master of science degree in communicative disorders and doctor of audiology degree in cooperation with the College of Health Related Professions of the University of Arkansas for Medical Sciences. The graduate program is accredited in both audiology and speech-language pathology through the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of ASHA and holds ASHA continuing education accreditation.

Students considering careers in audiology and speech pathology should consult the director of undergraduate audiology and speech pathology, Dr. Bethelyn Gentry, for advisement early in their program. Students enrolling in this major are encouraged to complete a graduate program in audiology and speech pathology. Students may, however, complete the preprofessional BS degree and choose to work or pursue advanced training in other professional fields of employment, several of which are found in this college. Students with degrees in other areas should also see Dr. Bethelyn Gentry. These post baccalaureate students will be required to take 27 hours of undergraduate courses.

Students are required to achieve and maintain a minimum grade point average of 2.50 after 50 semester hours. Only grades of C or greater are accepted in AUSP courses to fulfill requirements for the major. Undergraduate students transferring from another college or university into the department must meet department admission requirements. Degree-seeking transfer students must take at least 15 hours in the department.

Suggested minors include gerontology, psychology, sociology, speech communication, any of the sciences, sign language studies, and the college human services minor.

### Minor in Speech Pathology
A minor in speech pathology requires 18 hours of course work, including AUSP 2360 and 3360, and 12 hours from 3350, 3362, 3461, 4368, or with the instructor’s permission from 3363, 4363, 4364, and 4366. Students who minor in speech pathology must meet with Dr. Bethelyn Gentry, the department’s undergraduate advisor for minors, each semester before registering.

### Major in Speech Pathology (41 hours)

<table>
<thead>
<tr>
<th>Junior Year-Fall (9 hours)</th>
<th>Senior Year-Fall (10 hours)</th>
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<tbody>
<tr>
<td>AUSP 2360 Introduction to Speech and Hearing Disorders</td>
<td>AUSP 3364 Speech Science</td>
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<tr>
<td>AUSP 3350 Phonetics</td>
<td>AUSP 4162 Practicum I</td>
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<tr>
<td>AUSP 3361 Speech Anatomy and Physiology</td>
<td>AUSP 4366 Language Disorders</td>
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<td>AUSP 4368 Audiology</td>
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<tr>
<th>Junior Year-Spring (12 hours)</th>
<th>Senior Year-Spring (10 hours)</th>
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<tbody>
<tr>
<td>AUSP 3360 Language and Speech Acquisition</td>
<td>AUSP 4163 Practicum II</td>
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<tr>
<td>AUSP 3362 Hearing Science</td>
<td>AUSP 4363 Voice and Stuttering Disorders</td>
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<td>AUSP 3363 Disorders in Articulation</td>
<td>AUSP 4364 Differential Diagnosis of Speech and Language Disorders</td>
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<tr>
<td>AUSP 3365 Clinical Management</td>
<td>AUSP 4369 Audiologic Rehabilitation</td>
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### Courses in Audiology and Speech Pathology (AUSP)

**AUSP 2360 Introduction to Speech and Hearing Disorders**
A description and discussion of speech, language, and hearing disorders; therapy surveys and assessment techniques. Three credit hours.

**AUSP 3350 Phonetics**
In depth study of principles of phonetics and their application to speech. Three credit hours.

**AUSP 3360 Language and Speech Acquisition**
Prerequisite: consent of instructor. The study of normal verbal speech and language acquisition. Three credit hours.

**AUSP 3361 Speech Anatomy and Physiology**
Anatomy and physiology of the speech and hearing mechanism and associated structures. Three credit hours.

**AUSP 3362 Hearing Science**
Prerequisite: consent of instructor. An introduction to the study of hearing. Emphasis will be given to the elements of sound, auditory physiology, psychoacoustical methods, and theories of hearing. Three credit hours.

**AUSP 3363 Disorders in Articulation**
Prerequisites: AUSP 2360 and 3350 or consent of instructor. Theory, evaluation, and therapeutic procedures with functional and organic articulatory and phonological disorders. Three credit hours.

**AUSP 3364 Speech Science**
Prerequisite: AUSP 3350. Speech as an acoustic phenomenon; special reference to voice, rate, articulation; survey of experimental literature; theoretical, practical consideration of mechanical, electrical instruments used in diagnostic, therapeutic, experimental aspects of speech pathology, audiology. Three credit hours.

**AUSP 3365 Clinical Management**
Prerequisite: AUSP 2360. For majors only. Clinical procedures for working in various practicum settings, using diagnostic and therapeutic techniques, writing behavioral objectives, procedures for report writing, and practical experience with clinician-made and commercial materials. First in the series of practicum courses. Three credit hours.

**AUSP 4162 Practicum I**
Prerequisites: AUSP 3365, consent of instructor. For majors only. Supervised clinical practice in the areas of speech and/or language disorders. Requires at least 15 client clock hours. Must be taken first in clinical practicum series. One credit hour.

**AUSP 4163 Practicum II**
Prerequisites: AUSP 3365, 4162, consent of instructor. For majors only. Only two practicums may be taken on the undergraduate level. One credit hour.
AUSP 4164 Practicum III
Prerequisites: AUSP 3365, consent of instructor. For majors only. Supervised clinical activity in specialized areas. Requires 60 client clock hours. Only two practicums may be taken on the undergraduate level. One credit hour.

AUSP 4363 Voice and Stuttering Disorders
Prerequisites: AUSP 2360, 3361, 3350, or consent of instructor. Etiology, evaluative, and therapeutic procedures for persons with voice disorders and with various types of verbal disfluency behaviors. Three credit hours.

AUSP 4364 Differential Diagnosis of Speech and Language Disorders
Prerequisites: AUSP 2360, 3360, 3363, or consent of instructor. Interview and test procedures used in evaluating speech and language disorders. Emphasis on use and interpretation of standardized test measures. Three credit hours.

AUSP 4366 Language Disorders
Prerequisite: AUSP 3360 or consent of instructor. Language disorders in adults and children including types of language disorders, etiology, neurological and theoretical correlates, diagnostic procedures and test interpretation, and treatment protocols. Dual-listed in the UALR Graduate Catalog as AUSP 5366. Three credit hours.

AUSP 4368 Audiology
Prerequisite: AUSP 3362. Principles of auditory reception; the hearing mechanism; problems involved in measuring, evaluating, and conserving hearing. Clinical observation. Dual-listed in the UALR Graduate Catalog as AUSP 5368. Three credit hours.

AUSP 4369 Audiologic Rehabilitation
Prerequisite: AUSP 2360, 4368, or consent of instructor. Principles of audiologic habilitation/rehabilitation with infants, children, and adults with hearing loss. Discussion of communication and education options for children with hearing loss, counseling techniques, communication strategies, and the use of amplification and other assistive technologies. Three credit hours.

AUSP 4101, 4201, 4301 Independent Study
Students will read and research in a selected area of communicative disorders. Projects and papers must be approved by the instructor before registration. One, two, or three credit hours.
The department provides courses for students pursuing careers in law enforcement, corrections, and juvenile and adult courts. A bachelor of arts in criminal justice, an associate of arts in law enforcement, and a minor in criminal justice are available through the department.

**Major in Criminal Justice**

A major in criminal justice requires 30 credit hours, including CRJU 2300, 3303, 3306, 4300, and 4304. While the department will consider similar courses from other schools as substitutes for the core courses, the acceptance of those courses is solely at the department’s discretion. Students majoring in criminal justice must complete at least 15 hours within the Department of Criminal Justice at UALR. For information regarding graduate study in criminal justice, see the UALR Graduate Catalog.

**Minor in Criminal Justice**

A minor in criminal justice requires 18 credit hours, which must include CRJU 2300.

**Associate Degree in Law Enforcement**

This two-year associate degree program in law enforcement requires 62 hours, including CRJU 2300 and 3306. Twenty of the 62 hours must be at the 2000-level or higher. Credits earned for the associate degree may be applied to the bachelor of arts in criminal justice.

### Bachelor of Arts In Criminal Justice

- **Degree Requirements**
  - Core Curriculum (44 hours)
  - Second Language Requirement
  - Required Courses
    - CRJU 2300 Introduction to Criminal Justice
  - CRJU 3303 Survey of Corrections
  - CRJU 3306 Police Administration and Management
  - CRJU 4300 Crime and Behavior
  - CRJU 4304 Research Methods
  - Upper-level CRJU courses (15 hours)

### Associate Degree Requirements

- Core Curriculum (15 hours)
  - MATH 1302 College Algebra, or MATH 1315 College Mathematics
  - RHET 1311 Composition I
  - RHET 1312 Composition II
  - POLS 1310 American National Government
  - SPCH 1300 Speech Communication
- Pattern Requirements (3 hours)
  - One of the following courses
    - JOUR 2330 Mass Media and Society
  - SOCI 2300 Introduction to Sociology
  - PSYC 2300 Psychology and the Human Experience
- Required Courses for Major (15 hours)
  - CRJU 2300 Introduction to Criminal Justice
  - CRJU 3306 Police Administration and Management
  - Three upper-level CRJU courses (9 hours)
  - At least six hours must be taken with the department.
- Undesignated Electives (29 hours)
  - Selected in consultation with the academic advisor

### Courses in Criminal Justice (CRJU)

- **CRJU 2300 Introduction to Criminal Justice**
  - Basic understanding of legal and ethical foundations of criminal justice and the major components of the criminal justice system. Three credit hours.

- **CRJU 2301 Police and Community Crime Prevention**
  - The role of the police in community crime prevention efforts; citizen organization and participation; the police as the crucial linkage; examination of existing programs, problems, and potential; analysis of success and failure in joint community crime prevention efforts. Three credit hours.

- **CRJU 3105, 3205, 3305 Seminar in Criminal Justice**
  - Prerequisite: CRJU 2300. A study of special problems, issues, or trends relating to the criminal justice system. May be repeated with change of subject and with permission of the department chairperson. One, two, or three credit hours.

- **CRJU 3301 Criminal Evidence**
  - Prerequisite: CRJU 2300. An analysis of the legal problems associated with the investigation of crime; the acquisition, preservation, presentation of evidence; principles of proof in criminal proceedings. Three credit hours.

- **CRJU 3302 Legal Aspects of Law Enforcement**
  - Prerequisite: CRJU 2300. A study of the leading constitutional cases in the area of criminal justice with particular emphasis on cases dealing with search and seizure, the privilege against self-incrimination, assistance of counsel, and fair trial guarantees. Three credit hours.

- **CRJU 3303 Survey of Corrections**
  - Explores the operation of the correctional system within the context of society and within the criminal justice system, the integration of criminology, the courts and corrections, the relationship the correctional system has to society, its interaction with the other components within the criminal justice system, and its historical foundations. Three credit hours.

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1. At least 15 hours must be taken within the department.
2. See “Associate Degree Requirements” on page 25 for a complete list of general requirements for associate degrees.
CRJU 3304 Police and Society
This course will examine the relationship between the police and the community from several different perspectives. We will start with an introduction to the history, practices and issues related to the law enforcement function in our society, followed by an overview of police functions and responsibilities at the local, state, and federal levels. Police operations will be examined relative to effectiveness in crime control, delivery of services, and maintenance of order. We will review contemporary policy issues, programs and strategies. Finally, we will examine existing programs, problems, and potential directions as well as successes and failures in policing. Primary emphasis will be placed on community policing and its impact on policing in the 21st century. Three credit hours.

CRJU 3306 Police Administration and Management
Basic understanding of the part police play within society and within the criminal justice system. Explores the relationship the police have to society, their interaction with the other components within the criminal justice system, and their historical foundations. Discusses management strategies that have been employed over the past century in policing emphasizing the daily administration of a police agency. Three credit hours.

CRJU 3307 Criminal Law
Prerequisite: CRJU 2300. An analysis of criminal acts, elements of specific crimes, and defenses permitted in the United States legal system. Three credit hours.

CRJU 3309 Cybercrime
Prerequisite: IFAS 2300 or consent of instructor. Designed to acquaint students with law enforcement’s response to crimes committed using computers, networks, and the internet. Three credit hours.

CRJU 3310 Race/Ethnicity and Criminal Justice
Prerequisite: CRJU 2300. An exploration of the differing experiences of racial/ethnic groups as they come into contact with crime and the criminal justice system. Three credit hours.

CRJU 3311 Gangs
Prerequisite: CRJU 2300. An examination of the historical, cross-cultural, and current state of gang involvement. Three credit hours.

CRJU 3312 Victimization
Prerequisite: CRJU 2300. A review of the distribution and causes of crime from the point of view of the victim, as well as detailing the interface between victims and the legal and social service communities. Three credit hours.

CRJU 3313 Crime and Science: An Introduction to Forensic Science
A general overview of the field of forensic science, the application of “science,” and the scientific method to the law. Topics such as criminalistics, including firearms and tools, trace evidence, fingerprints, toxicology, and biological evidence, such as serology and DNA. Forensic pathology, forensic odontology, forensic anthropology, and forensic psychology will be introduced. An experience oriented component will be provided by currently active forensic specialists. Three credit hours.

CRJU 3337 Juvenile Delinquency
See SOCI 3337.

CRJU 3348 Internship I
Prerequisite: consent of instructor. Experience in law enforcement agencies, juvenile courts, probation and parole departments, other correctional institutions, delinquency control programs, and public or voluntary agencies. Three credit hours.

CRJU 3349 Internship II
A continuation of CRJU 3348. Three credit hours.

CRJU 3396 Psychology and the Criminal Process
An exploration of the contributions of psychology to the practice of law, law enforcement, and other related areas, illustrated in terms of testimony and court procedures, psychopathology, correctional services, the development of laws, and social psychology. Three credit hours.

CRJU 4199, 4299 Criminal Justice Workshop
Subjects vary. Sixteen hours of workshop time will equal one credit hour. One or two credit hours.

CRJU 4300 Crime and Behavior
Enables students to identify and understand the major schools of thought in criminology and to integrate them into a comprehensive application to the real world. Three credit hours.

CRJU 4301 Judicial System and Process
Prerequisites: CRJU 2300. A survey of state, local, and federal judicial systems and their interrelationships. Examines judicial structures, functions, and decision-making procedures. Dual-listed in the UALR Graduate Catalog as CRJU 5301. Three credit hours.

CRJU 4302 Law and Society
Prerequisites: CRJU 2300. An examination of the origins and history of law in society, including the evolving roles of judges, juries, defense attorneys, and prosecutors. Examines the evolution of civil and criminal law, the adversary system, and the concept of justice. Dual-listed in the UALR Graduate Catalog as CRJU 5302. Three credit hours.

CRJU 4303 Readings in Criminal Justice
Prerequisite: CRJU 2300. A survey of the current literature on crime and law enforcement, with emphasis on special research reports and periodic and journal articles in criminal justice, law sociology, and related fields. Three credit hours.

CRJU 4304 Research Methods
Instruction in reading and comprehension of reports and research within the criminal justice field, identify the application of various research techniques and statistical methods, and produce a draft research proposal. Three credit hours.

CRJU 4305 Juvenile Law and Process
Prerequisite: CRJU 2300. An exploration of the philosophical basis, process, legal rights of juveniles, and roles of the major participants in the juvenile justice system. Three credit hours.

CRJU 4307 Drug Abuse
A study of frequently abused drugs, with emphasis on the personal, social, and legal consequences of drug abuse and on the treatment of drug addiction. Three credit hours.

CRJU 4120, 4220, 4320 Independent Study
Prerequisites: 15 hours of CRJU courses, senior standing with 3.00 GPA, consent of instructor. Advanced study and research. One, two, or three credit hours.

CRJU 4332 Corrections Psychology
Prerequisite: CRJU 2300. A review of theoretical and applied issues in the practice of correctional psychology. Focus on relevant empirical studies and their application in a correctional context. Three credit hours.

CRJU 4333 Cooperative Education
Prerequisite: consent of instructor. Experience in law enforcement agencies, juvenile courts, probation and parole departments, other correctional institutions, delinquency control programs, and public or voluntary agencies. Three credit hours.

CRJU 4351 Constitutional Law II
See POLS 4351.

CRJU 4380 Comparative Criminal Justice Systems
Prerequisites: CRJU 2300. An analysis of the law enforcement, judicial, and correctional systems of other nations, with emphasis on comparison with the United States system of criminal justice. Dual-listed in the UALR Graduate Catalog as CRJU 5380. Three credit hours.
The School of Mass Communication combines the strengths of courses in radio, television, and film and journalism to provide students with exposure to a broad spectrum of media studies. Students may receive degrees in either media, TV, or film or journalism. The School also offers students a variety of mass communication minors.

Journalism

The journalism major prepares students to become successful writers, reporters, and editors for broadcast and print media. The major also prepares students to become successful public relations practitioners. The curriculum is designed to prepare academically sound, technically proficient, responsible, and liberally educated graduates. The bachelor of arts degree in journalism is offered with the student having the choice of three areas of concentration: broadcast journalism, news-editorial (print journalism), and public relations. The program also offers the bachelor of arts in professional and technical writing in conjunction with the Department of Rhetoric and Writing.

The School also offers a master's of arts degree in journalism. See the UALR Graduate Catalog for details.

The School sponsors chapters of Kappa Tau Alpha, the national journalism scholarship society, the National Association of Black Journalists, the Public Relations Student Society of America, the National Broadcasting Society, and the Society of Professional Journalists.

Journalism majors are invited to apply for annual scholarships contributed by the Arkansas Democrat-Gazette, friends of Edward Jay Friedlander, friends of William K. Rutherford, Herbert and Gertrude Latkin, friends of Harry Ashmore, Clifton O. Lawhorne, the family of Roy Mitchell, and Edith Wood Sweeney; the Governor Orval E. Faubus Scholarship, the Robert Hamilton Memorial Scholarship, the Gannett News Producers Scholarship, the Television Broadcasters of Arkansas Scholarship, the David M. Guerra News Scholarship, the Robert Brown Scholarship, the TreDay.Com Scholarship Project, and the Jerol Garrison Journalism Scholarship. Journalism students also may compete for other University scholarships.

All material submitted by students as assignments in writing, reporting, editing, photography, and electronic news gathering classes is subject to broadcast or publication. Students taking journalism writing courses must have at least minimal word processing ability.

Admission to Journalism

After admission to UALR, any student may declare a major or minor in journalism. To discuss journalism opportunities, students should visit the director of the School of Mass Communication at Stabler Hall 705, call the school at (501) 569-3250, or e-mail jnbyrne@ualr.edu.

Broadcast Journalism

The broadcast journalism option requires these 36 hours:

- JOUR 2330 Mass Media and Society
- RTVF 2300 Audio and Video Practicum
- JOUR 2350 Techniques of Writing for the Mass Media
- RTVF 3320 Announcing and Performance
- JOUR 3365 Radio-Television Journalism

Electives: three courses (9 hours):

- JOUR 3330 Photojournalism
- JOUR 3375 Feature Writing
- JOUR 4300 Mass Communication Internship
- SPCH 3320 Business and Professional Speaking
- MKTG 3350 Principles of Marketing
- JOUR 3370 Principles of Advertising
- JOUR 3382 Public Relations Case Studies and Campaigns

One of the electives selected above must be either MKTG 3350 Principles of Marketing or JOUR 3382 Principles of Advertising. A student may take both.

News-Editorial

The news-editorial option requires these 36 hours:

- JOUR 2330 Mass Media and Society
- JOUR 2350 Techniques of Writing for the Mass Media
- JOUR 3320 Reporting Principles
- JOUR 3350 News Editing
- JOUR 3375 Feature Writing
- JOUR 4352 Mass Communication Law
- JOUR 4353 History of the Mass Media in America
- JOUR 4358 Reporting of Public Affairs
- Four additional JOUR courses (12 hours)

Public Relations

The School, in cooperation with the Department of Marketing and Advertising, also offers a public relations option in the journalism major. The purpose of this course of study in the journalism major is to prepare students to become public relations specialists by guiding them through a variety of communication courses with an emphasis on the journalistic aspects of public relations. The option consists of these 36 hours:

- JOUR 2330 Mass Media and Society
- JOUR 2350 Techniques of Writing for the Mass Media
- JOUR 3320 Reporting Principles
- JOUR 3350 News Editing
- JOUR 4352 Mass Communication Law

Public Relations Core

- ADVT 4310 Public Relations
- JOUR 4380 Public Relations Writing
- JOUR 4350 Editing, Design, and Production
- JOUR 4382 Public Relations Case Studies and Campaigns

- JOUR 3330 Photojournalism
- JOUR 3375 Feature Writing
- JOUR 4390 Mass Communication Internship
- SPCH 3320 Business and Professional Speaking
- MKTG 3350 Principles of Marketing
- ADVT 3300 Principles of Advertising
- ADVT 4320 International Marketing
- ADVT 4370 International Promotion Management and Public Relations
- RTVF 3308 Writing for the Electronic Media
- JOUR 4389 Independent Study
- JOUR 4384 Topics in Journalism

One of the electives selected above must be either MKTG 3350 Principles of Marketing or ADVT 3300 Principles of Advertising. A student may take both.
Secondary Teacher Licensure
The School of Mass Communication also offers a Journalism Endorsement curriculum for any teacher certified in grades 7-12. The Journalism Endorsement curriculum consists of the following four courses, at least three of which must be completed at UALR:

JOUR 2330 Mass Media and Society
JOUR 2350 Techniques of Writing for the Mass Media
JOUR 3320 Reporting Principles
JOUR 3330 Photographic Journalism

Students desiring to complete one class at a campus other than UALR must obtain prior approval from the School of Mass Communication.

Major in Advertising/Public Relations
A major in advertising/public relations is offered through the Department of Mass Media and Advertising. See the chairperson in marketing and advertising for more information about that major.

Major in Professional and Technical Writing
The School, in conjunction with the Department of Rhetoric and Writing, offers a major in professional and technical writing that features two different tracks. Track I, advised by the journalism faculty, is 30 hours equally distributed between journalism and the Department of Rhetoric and Writing. Track II, advised by the rhetoric and writing department, is 30 hours with a heavier emphasis upon rhetoric and writing courses. Both of these tracks lead to a bachelor of arts in professional and technical writing.

Track I
Track I places equal emphasis upon both disciplines. The specialized techniques of news and feature writing taught in journalism courses share the student’s attention equally with the technical writer’s concern with format and process. Students are required to take these 30 hours:

JOUR 2350 Techniques of Writing for the Mass Media
JOUR 3320 Reporting Principles
JOUR 3375 Feature Writing
JOUR 4358 Reporting of Public Affairs
JOUR 4359 Magazine Journalism
RHET 3316 Writing for the Workplace
RHET 3317 Expository Writing
Three upper-level RHET courses (9 hours)

Track II
Track II of the professional and technical writing major also consists of 30 hours, most of which are selected from the offerings of the Department of Rhetoric and Writing. This track has as its goal to prepare students for writing in a variety of government and business situations. Students are required to take these 30 hours:

JOUR 2350 Techniques of Writing for the Mass Media
RHET 3301 Editing for Usage, Style, and Clarity
RHET 3315 Persuasive Writing
RHET 3316 Writing for the Workplace
RHET 3317 Expository Writing
RHET 4301 Theories of Rhetoric and Writing
Four courses (12 hours) of electives (three hours of which may be selected from journalism writing courses)

Minor in Journalism
A minor in journalism requires these 18 hours of courses:

JOUR 2350 Techniques of Writing for the Mass Media
JOUR 3320 Reporting Principles or JOUR 3365 Radio-Television Journalism
Four upper-level JOUR courses (12 hours)

Courses in Journalism (JOUR)

JOUR 1340 Fundamentals of Photography
Fundamentals of black and white photography and an introduction to color photography. Laboratory instruction in darkroom procedures. Students must provide a 35mm adjustable camera. Credit hours may not be applied to the journalism major or minor requirements. Three credit hours.

JOUR 2330 Mass Media and Society
Survey of relationships involving mass media, culture, and various other interconnected systems, both nationally and globally. Includes discussion of functions, freedoms, and responsibilities of mass media, and effects on individuals and social groups. Topics will include newspapers, magazines, radio, television, and other media. Three credit hours.

JOUR 2350 Techniques of Writing for the Mass Media
Introduction to basic news and feature writing skills. Style and story structure for print and electronic media. Laboratory instruction and practice in writing for publication. Three credit hours.

JOUR 3320 Reporting Principles
Prerequisite: JOUR 2330. Application of principles of news writing to journalism practice; development of skills in evaluating the news, interviewing, and gathering information. Laboratory instruction and practice in objective reporting. Materials submitted as assignments are subject to publication. Three credit hours.

JOUR 3330 Photographic Journalism
Fundamentals of news and feature photography for newspaper and magazine publication. Laboratory instruction in darkroom procedures. Materials submitted as assignments are subject to publication. Three credit hours.

JOUR 3350 News Editing
Prerequisite: JOUR 2350. Recommended corequisite: JOUR 3320. Introduction to news editing. Instruction and practice in content editing, style editing, and headline writing for the print media; use of computers to edit copy; fundamentals of design for the print media. Three credit hours.

JOUR 3365 Radio-Television Journalism
Prerequisites: JOUR 2350, RTVF 2300. Recommended prerequisite: RTVF 3320. Writing and editing news and commentary for radio and television; procedures and style in broadcast and telecast news. Three credit hours.

JOUR 3366 Electronic News Gathering
Prerequisite: JOUR 3365 or consent of instructor. Recommended prerequisite: RTVF 3320. Study and application of advanced techniques of reporting, writing, and delivery of radio and television news. Examination of different approaches to planning news coverage, gathering audio and video actualities, interviewing techniques, and the principles of packaging news stories. Three credit hours.

JOUR 3375 Feature Writing
Prerequisite: JOUR 3320 or 3365 or consent of instructor. Planning, researching, and writing the newspaper feature article. Emphasis on humanistic reporting and backgrounding the news. Materials submitted as assignments are subject to publication. Three credit hours.

JOUR 4350 Editing, Design, and Production
Prerequisite: JOUR 3350. Decision-making in the editing process. Principles of typography, publication design, and printing processes. Experience in the use of computers to design camera-ready materials for publication. Dual-listed in the UALR Graduate Catalog as JOUR 5350. Three credit hours.

JOUR 4352 Mass Communication Law
Prerequisite: JOUR 3350. Decision-making in the editing process. Principles of typography, publication design, and printing processes. Experience in the use of computers to design camera-ready materials for publication. Dual-listed in the UALR Graduate Catalog as JOUR 5352. Three credit hours.

JOUR 4353 History of the Mass Media in America
Prerequisite: JOUR 3350. Development of the mass media from their beginnings. Political, social, and economic interaction of the American people and the media, as related to historical precedent. Three credit hours.

JOUR 4357 Seminar in Radio-Television Journalism
Prerequisite: JOUR 3350. Broadcast news policies; history; governmental and other forms of regulation; social implications; influence of various publics on radio-television news coverage. Dual-listed in the UALR Graduate Catalog as JOUR 5357. Three credit hours.

JOUR 4358 Reporting of Public Affairs
Prerequisite: JOUR 3320 or 3365 or consent of instructor. Practice in gathering material and writing in-depth stories on public affairs; emphasis on courts, government, education, ecology, the economy, and social issues. Materials submitted as assignments are subject to publication. Dual-listed in the UALR Graduate Catalog as JOUR 5358. Three credit hours.

JOUR 4359 Magazine Journalism
Prerequisite: JOUR 3320 or consent of instructor. Writing the nonfiction magazine article; free-lance marketing procedures. Dual-listed in the UALR Graduate Catalog as JOUR 5359. Three credit hours.

JOUR 4375 Journalistic Freedom and Responsibility
Prerequisite: JOUR 3350. Journalistic ethics and practices; professional conduct and responsibilities of the journalist in a free society. Dual-listed in the UALR Graduate Catalog as JOUR 5375. Three credit hours.
JOUR 4380 Public Relations Writing
Prerequisite: JOUR 2350. 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. Dual-listed in the UALR Graduate Catalog as JOUR 5380. Three credit hours.

JOUR 4382 Public Relations Case Studies and Campaigns
Prerequisites: ADVT 4310 or consent of instructor. Study of recent public relations cases involving business, industry, institutions and government, with special emphasis on the application of public relations principles introduced in ADVT 4310. Includes student project. Three credit hours.

JOUR 4384 Topics in Journalism
Prerequisite: junior standing or consent of instructor. Advanced and specialized topics in journalism and mass media, especially those of current interest and relevance to journalism professionals. Possible subjects include the following: reporting entertainment news, minority issues in journalism, sports journalism and health, and science and environmental journalism. Classes will provide an in-depth understanding of topics chosen. Refer to the semester schedule for specific topics offered. Dual-listed in the UALR Graduate Catalog as JOUR 5384. Three credit hours.

JOUR 4189, 4289, 4389 Independent Study
Prerequisites: junior standing, consent of instructor, approval of independent study proposal before registration. Individual in-depth study, research, or designated on-campus practicum related to broadcast journalism, news-editorial, public relations options, or professional and technical writing. Up to three hours may be counted toward the major. One, two, or three credit hours.

Radio, Television, and Film
The radio, television, and film major is designed to provide students with the practical and theoretical knowledge needed to become effective mass media professionals and media consumers. The major also prepares students for study at the graduate level.

The radio, television, and film major is structured for flexibility in meeting individual needs while emphasizing the high degree of professionalism and responsibility expected in broadcasting, film, and related media industries.

A major in radio, television, and film (RTVF) requires 36 credit hours. An RTVF minor requires 18 credit hours. A minor in film requires 18 credit hours. Majors may emphasize electronic news, station and system operations, production, or the new media technologies.

Production facilities include a professionally equipped television studio, a mobile television production truck, television field production equipment, nonlinear editing laboratory, and a video performance lab. Three audio production labs and a state-of-the-art computerized newsroom with computer-based production facilities are also available for student use.

The School operates cable television channel “20,” and has cooperative arrangements with KUAR and KLRE, two public radio stations that are affiliated with the University. Students produce programs for these media outlets.

The School also has a Professional Advisory Council (PAC) composed of media professionals who are actively involved in the promotion and improvement of education at UALR. In addition to PAC members, the School maintains professional relationships with a variety of media organizations that provide internships, scholarships, and other resources to the school. The school also participates in UALR’s Cooperative Education Internship program.

RTVF majors may apply for annual scholarships provided by the Robert L. Brown family, Comcast Cable, Patricia Carter Willcox Scholarship, the RTVF faculty, the Dr. Mary Jean Thomas Graduate Scholarship, Sam Anderson Scholarship, the Television Broadcasters of Arkansas, the TreDay.Com Scholarship Project, the Gannett News Producers Scholarship and the Dr. David M. Guerra Electronic News Scholarship. Scholarship opportunities may vary each year.

The School sponsors a local chapter of the National Broadcasting Society (NBS), which includes the honorary Alpha Epsilon Rho (AERho). NBS is an award-winning career-oriented service organization for media students and professionals.

RTVF also offers nine hours of graduate study, which may be applied toward the master’s degree in journalism and other UALR programs. See the UALR Graduate Catalog for more details.

Criteria for Admission to Major Status: Getting Started
After admission to UALR, students who are interested in the electronic media are encouraged to visit the program to discuss options in radio, television, film, and the new technologies with the school director or another available faculty member. The school is located on the seventh floor of Stabler Hall, Room 705. Students may contact the school at (501) 569-3250.

Minor in Radio, Television, and Film
A minor in RTVF requires 18 credit hours, including RTVF 2330, 2300, 2308, 3304, and six additional RTVF hours.

Minor in Film
The film minor is coordinated by the School of Mass Communication. Interested students should contact the director at (501) 569-3250.

Students taking this minor must take RTVF 2306 Introduction to Motion Pictures and then choose 15 semester hours of film courses. This is a multidisciplinary minor with a wide range of course choices. Students should discuss with an RTVF advisor which courses can be counted toward the film minor.

RTVF majors who minor in film cannot count these courses toward their major. RTVF majors are urged to take at least nine hours of film courses from outside of RTVF.
major in radio, television, and film

general sequence (36 hours)
RTVF 2330 mass media and society
RTVF 2300 audio and video practicum
RTVF 2308 introduction to scriptwriting
RTVF 3304 global communications
RTVF 3330 Audio Production I or RTVF 3340 Video Production—Studio
RTVF 3180, 3280, 3380 Internal Internship (total of three hours required)
RTVF 4195, 4295, 4395 Senior Project (total of three hours required)
One additional RTVF course (3 hours)

news sequence (36 hours)
RTVF 2330 mass media and society
RTVF 2300 audio and video practicum
JOUR 2350 Techniques of Writing for the Mass Media
RTVF 3320 Announcing and Performance
JOUR 3365 Radio-Television Journalism
JOUR 3366 Electronic News Gathering

Courses in Radio, Television, and Film (RTVF)

RTVF 2300 Audio and Video Practicum
Required of RTVF majors in the general sequence and news sequence. Also required for minors and recommended for students from other majors. Fundamentals of audio control-room procedures, audio recording and editing, single camera field production, and video editing. Emphasis on proper use and handling of equipment. Minimal exposure to video studio practices. RTVF majors in the general and news sequences must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 2306 Introduction to Motion Pictures
Basic elements of movies, the process of movie making, and the approaches to movie aesthetics and criticism. Assignments may include viewing motion pictures at local theaters. Three credit hours.

RTVF 2308 Introduction to Scriptwriting
Study and practice in basic writing and scripting skills needed for the production of electronic media messages and programs. Use of the RTVF computer lab. This course is required of radio, television, and film majors and minors. Students must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 2330 Mass Media and Society
Required of RTVF majors and minors. Survey of relationships involving mass media, culture, and various other interconnected systems, both nationally and globally. Includes discussion of functions, freedoms, and responsibilities of mass media, as well as the media’s impact on individuals and social groups. Topics include newspapers, magazines, radio, television, and other media. Course satisfies the Individuals, Cultures, and Societies core course requirement. Three credit hours.

RTVF 3304 Global Communications
Structures and roles of media systems within a global context. Examines the U.S. system in relationship to other international media systems. Required of all radio, television, and film general sequence majors and minors. RTVF majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3310 Programming Strategies
Objectives, values, and methods of local and national programming for commercial and public broadcasting and cable operations. Case studies and problem solving simulations. Problems of program planning based on audience analysis, measurement, and targeting. Three credit hours.

RTVF 3320 Announcing and Performance
Prerequisite: RTVF 2300 recommended. Required for journalism and radio, television, and film majors in the news sequence. Development of performance skills necessary for effective communication via the electronic media. Emphasis on announcing and visual presentation techniques, script reading, and adapting to the demands of the electronic media technologies. Use of the RTVF computer lab. Radio, television, and film majors in the broadcast news sequence must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3367 News Operations
Prerequisite: RTVF 3320 recommended. The viewer/listener is bombarded by information every day from the mass media. Provides students with a real opportunity to see, hear, and learn how all those television and radio news programs are created and to meet some of the people who get the job done. Use of RTVF’s computerized news center. RTVF majors in the news sequence must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3368 News Practices
Prerequisites: RTVF 3320, JOUR 3366 (may be corequisite). Production of programs for the electronic media. Students function individually and on news teams to develop high quality on-the-air news programs. Use of RTVF’s computerized news center. RTVF broadcast news majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

News Sequence (36 hours)
RTVF 3300 Audio and Video Practicum
RTVF 3350 History of the American Movies
RTVF 3354 Documentary Techniques
RTVF 3366 Electronic News Gathering

RTVF 3367 News Operations
RTVF 3368 News Practices
RTVF 3380, 3380 Internal Internship (total of three hours required)
RTVF 4316 Policy and Regulation or JOUR 4352 Mass Communication Law
RTVF 4195, 4295, 4395 Senior Project (total of three hours required)
One additional RTVF course (3 hours)

Additional Major Requirements
All majors must have at least minimal computer word processing skills. Students in the RTVF major must make grades of C or greater in all major courses.

Students may not count more than six hours of the courses listed below toward their major. Twelve of these hours may be counted within the 124 credit-hour graduation requirement.

RTVF 4180, 4280, 4380 External Internship
RTVF 4182, 4282, 4382 Cooperative Education
RTVF 4190, 4290, 4390 Independent Study
RTVF 3180, 3280, 3380 Internal Internship

Prerequisites:
RTVF 3180, 3280, 3380 Internal Internship (total of three hours required)
RTVF 3316 Policy and Regulation or RTVF 4366 Electronic News Gathering
RTVF 4316 Policy and Regulation or JOUR 4352 Mass Communication Law
RTVF 4195, 4295, 4395 Senior Project (total of three hours required)
One additional RTVF course (3 hours)

RTVF 3330 Radio Production I
Preference given to majors. Principles and techniques of audio production for both radio station broadcasting and production studios. Emphasis on the tools of production, equipment, special effects, and computerized editing. Application of skills and problem-solving emphasis in student projects. Radio, television, and film majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3340 Video Production—Studio
Preference given to majors. Introduction to studio control-room operations as they relate to the organizational and creative aspects of program production. Practice with cameras, lighting, microphones, audio console, video switcher, and computer graphics. Students rotate through all crew positions and learn techniques of producing and directing. Emphasis on high professional standards. Lecture with laboratory. Radio, television, and film majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3342 Video Production—EFP
Prerequisite: RTVF 2300 recommended. Intermediate-level application of video skills to electronic field production methods of shooting, recording, and editing. Student projects could include commercial and public service announcements, documentary features, and film-technique narratives. Three credit hours.

RTVF 3350 History of the American Movies
History and development of the American entertainment motion picture industry from the technological to the aesthetic and social to the economic perspectives. Includes the evolution of the American movie industry as it relates to audience uses and gratifications. Three credit hours.

RTVF 3354 Documentary Techniques
Study of the documentary approach in audio and video programs and motion pictures. Emphasis on development of critical standards and examination of the teaching and persuasion techniques used in selected documentary, educational, and propaganda productions. Assignments include viewing motion pictures and television documentaries and listening to radio documentaries. Three credit hours.

RTVF 3356 Movie Criticism
Criticism of contemporary movies, concentrating on the creative elements used in the service of aesthetics and the application of scholarly and popular critical standards. Certain historical references are included. Assignments include the viewing of motion pictures at local theatres. Three credit hours.

RTVF 3367 News Operations
Prerequisite: RTVF 3320 recommended. The viewer/listener is bombarded by information every day from the mass media. Provides students with a real opportunity to see, hear, and learn how all those television and radio news programs are created and to meet some of the people who get the job done. Use of RTVF’s computerized news center. RTVF majors in the news sequence must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

College of Professional Studies
RTVF 3180, 3280, 3380 Internal Internship
Prerequisites: RTVF 2300, 3330 or 3340, junior standing. On-campus internship providing actual work experience at the University cable television channel “62” and the University radio stations. Required RTVF majors. Only three credit hours counted toward the 36-hour major. Should be completed in two increments, RTVF 3180 and 3280 or with advisor approval, it may be completed in one semester RTVF 3380. Students must earn a minimum grade of C for credit toward the major and graduation. Class may be repeated up to an additional nine credit hours that may count toward the 124 hours required for graduation. One, two, or three credit hours.

RTVF 4170 Special Topics: RTVF
Prerequisite: RTVF 3180, 3280, 3380
[See course description for RTVF 4370 Special Topics: RTVF]

RTVF 4172 Special Topics: Emerging Technologies
[See course description for RTVF 4372 Special Topics: Emerging Technologies]

RTVF 4180 External Internship
Prerequisite: RTVF 3195
[See course description for RTVF 4380 External Internship]

RTVF 4182 Cooperative Education
Prerequisite: RTVF 3180
[See course description for RTVF 4382 Cooperative Education]

RTVF 4190 Independent Study
Prerequisite: RTVF 3180
[See course description for RTVF 4390 Independent Study]

RTVF 4195 Senior Project
Prerequisite: RTVF 3180
[See course description for RTVF 4395 Senior Project]

RTVF 4272 Special Topics: Emerging Technologies
[See course description for RTVF 4372 Special Topics: Emerging Technologies]

RTVF 4270 Special Topics: RTVF
Prerequisite: RTVF 3180
[See course description for RTVF 4370 Special Topics: RTVF]

RTVF 4280 External Internship
[See course description for RTVF 4380 External Internship]

RTVF 4282 Cooperative Education
[See course description for RTVF 4382 Cooperative Education]

RTVF 4290 Independent Study
[See course description for RTVF 4390 Independent Study]

RTVF 4295 Senior Project
[See course description for RTVF 4395 Senior Project]

RTVF 4308 Advanced Scriptwriting
Prerequisite: RTVF 2308 or consent of instructor. Writing program-length scripts for audio and video media, including documentaries, entertainment specials, drama, and commercial and public service campaigns. RTVF computer lab available. Three credit hours.

RTVF 4310 Sales and Promotion
Prerequisite: RTVF 3310 recommended. Role of sales in media management, positioning, programming, and business performance. Attention to audience research, prospect identification and development, presentational packages and the problems of closing, scheduling, verification, legal requirements, and use of the computer. Role of promotion in positioning, identity, audience reinforcement and sales. Practical application projects. Three credit hours.

RTVF 4312 Management Strategies
Prerequisite: junior or senior standing. Role and responsibilities of media managers in broadcast and cable operations, independent production houses, organizational media units, and the new technologies. Case studies with emphasis on coordination of work units and personnel, legal obligations, resource generation and management, public relations, and computers. Required course of all RTVF majors. Students must earn a minimum grade of C for credit toward the major and graduation. Dual-listed in the UALR Graduate Catalog as RTVF 5312. Three credit hours.

RTVF 4316 Policy and Regulation
Prerequisite: junior or senior standing. Examination of current problems, policies, legislation, and regulation of electronic media, including new technologies. Required of all RTVF majors. Students must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 4318 Emerging Technologies
Prerequisite: junior or senior standing. Examination of the media environment created by the new and evolving technologies. The interrelationship of the developing communication technologies (internet, computers, satellites, DBS, high-definition TV, among others) with the traditional public and commercial broadcasting, cable, and other media-related industries. Emphasis on legal, social, and technological issues and their impact on the media environment. Use of the RTVF computer lab and internet access. Dual-listed in the UALR Graduate Catalog as RTVF 5318. Three credit hours.

RTVF 4332 Audio Production Practicum II
Prerequisite: RTVF 3340. Advanced practicum in audio production techniques. Emphasis on production of radio features, spots, and programs for possible broadcast on the University radio stations, KUAR/KLRE. Students may also have the opportunity to be a board operator for the stations. Three credit hours.

RTVF 4342 Advanced Video Practicum
Prerequisite: RTVF 3340. RTVF 3342 is recommended. Students will produce, direct, and/or participate as crew members for The University Channel, and outside projects approved by the program. Minimum commitment of 10 hours weekly. Course may be taken more than once. Three credit hours.

RTVF 4370 Special Topics: RTVF
Prerequisite: junior standing or consent of advisor. Specialized study and research in a wide range of topics. Outside experts and topics will vary. One, two, or three credit hours.

RTVF 4372 Special Topics: Emerging Technologies
Prerequisite: junior standing or consent of the advisor. Specialized study and research in a wide range of topics. Outside experts and topics will vary. One, two, or three credit hours.

RTVF 4380 External Internship
Prerequisite: RTVF major; senior standing; must meet criteria for internship and have internship application approved by the internship coordinator. Professional work experience in media environments. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.

RTVF 4382 Cooperative Education
Prerequisite: RTVF major; senior standing; must meet criteria for internship and have internship application approved by the internship coordinator. Professional work experience in media environments. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.

RTVF 4390 Independent Study
Prerequisite: RTVF major; senior standing or program permission to enroll; approval of independent study application before registration. Individual in-depth study, research, or designated practicum in radio, television, motion pictures, or emerging technologies. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.

RTVF 4395 Senior Project
Prerequisite: RTVF major; senior standing or program permission to enroll; approval of independent study application before registration. Individual in-depth study, research, or designated practicum in radio, television, motion pictures, or emerging technologies. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.
The goal of the Department of Military Science is to provide leadership, citizenship, and management training while introducing basic military skills; and in conjunction with the goals of UALR, to develop individual attributes essential to an Army officer. Instruction covers a broad base of leadership, management, and military fundamentals. The basic course is open to all students. Students incur no military obligation for participation in the basic course. Enrollment in military science courses is based on the following requirements:

- A student must be enrolled at the University and remain at or above the University probationary level.
- When contracted by the Department of Military Science, normally at the start of the junior year, a student must have a cumulative grade point average of at least 2.00.

Qualified students may participate in the Reserve Officer Training Corps (ROTC) commissioning program. On successful completion of this program, the graduate is commissioned as a Second Lieutenant in the United States Army, Army Reserve, or National Guard.

The ROTC program is essentially a four-year sequence consisting of two parts: Basic, the freshman and sophomore years; and Advanced, the junior and senior years. Successful completion of the Basic courses is a prerequisite for Advanced course enrollment. However, up to two years of credit in the four-year ROTC program can be awarded for acceptable prior military service, current membership in the Reserves or National Guard, ROTC Basic Camp, or three years of Junior ROTC. Students may enroll in the Military Science I and Military Science II classes concurrently, or take Military Science II prior to Military Science I with instructor approval. Students are encouraged to talk with the chairperson of military science to determine their enrollment status.

Students enrolled in military science are furnished with all required books, uniforms, and equipment. Participation in the Basic course is voluntary; students incur no military obligation. Participation in the Basic course functions to familiarize students with different aspects of military life and leadership techniques. Students selected for the Advanced program who formally enroll in the Advanced course receive a $200 per month stipend.

Two and three-year scholarships (up to $16,000) are available to students who are strongly motivated toward a career in the Army. This scholarship pays for tuition, $600 per year for books, fees, and provides a $200 per month stipend. Recipients must agree to enroll in the Advanced program and serve on active duty as an officer if selected. Applicants do not have to be enrolled in military science in order to apply.

Four-year scholarships are available to high school seniors who have demonstrated leadership potential. Scholarship pays for tuition, $600 per year for books, fees, and provides $200 per month for the duration of the award. This scholarship is awarded by the Department of the Army during the student’s senior year of high school. Interested students should contact their high school counselor, the ROTC department, or the ROTC web site http://www.gotrotc.com/ for more information.

Registration for military science courses is accomplished at the same time and in the same manner as registration for other courses.

Minor in Military Science

The minor in military science requires 27 credit hours, including 12 hours of upper-level military science courses. The remaining 15 hours are satisfied by one of these courses from each of these groups: ENGL 2336, RHET 3315, 3316, or 3317; MGMT 2300 or 3300; POLS 4320 or 4340; HIST 4319; and CPSC 1370 or STAT 4350.

The military science minor gives the student a basic knowledge of leadership, the military environment, written communication, management, international relations, and military history necessary for a member of the military profession.

Military Leadership Lab

Prerequisite: enrollment in the appropriate level of the Military Science Program. Emphasis is on continued instruction and practical application of military fundamentals learned in the classroom. The course is designed to develop individual character, leadership abilities, and other attributes essential to an officer and a leader.

Courses in Military Science (MSCI)

MSCI 1101 Leadership
Emphasis on the importance of communication, decision making, and the understanding of human behavior as it affects leadership situations. One hour laboratory per week is required. One credit hour.

MSCI 1102 Leadership II
A continuation of MSCI 1101 which focuses on leadership development and basic tactical skills. One hour laboratory per week required. One credit hour.

MSCI 2304 Introduction to Military Organization/Tactics I
An introduction to the military organization and a study of basic tactics. One hour laboratory per week. Two credit hours.

MSCI 2305 Map Reading
An introductory course studying all aspects of land navigation, including military and topographic maps, aerial photographs, and photomaps. Practical exercises are emphasized. One hour laboratory per week. Three credit hours.

MSCI 3305 Advanced Leadership and Tactics I
An in-depth study of unit tactics and related individual skills, advanced map reading, and their practical application. Emphasis on person-to-person leadership skill development. Two hours laboratory per week. Two credit hours.

MSCI 3306 Advanced Leadership and Tactics II
A continuation of MSCI 3305. Two hours laboratory per week. Three credit hours.

MSCI 4307 Applied Leadership and Management I
A study of command and staff functions and practical exercises in planning, organizing, and supervising. Students plan and administer all activities of the cadre corps. Emphasis on leadership and management of larger organizations. Two hours laboratory per week. Three credit hours.

MSCI 4308 Applied Leadership and Management II
A continuation of MSCI 4307. Two hours laboratory per week. Three credit hours.
DEPARTMENT OF PUBLIC ADMINISTRATION

UALR’s Institute of Government offers the master of public administration degree program to prepare students for professional management and leadership positions at all levels of government and the nonprofit sector. For more information see the UALR Graduate Catalog.

Courses in Public Administration (PADM)

**PADM 3310 Policy Process**  
See POLS 3310. Three credit hours.

**PADM 3331 Public Administration**  
Prerequisite: POLS 1310 or junior standing. Trends and organization of public administration; fiscal and personnel management; administrative powers and responsibility. Three credit hours.

**PADM 4313 Public Personnel Administration**  
Analysis of the policies, practices, and issues of public personnel administration, including recruitment and selection processes, classification and pay plans, training, career management, separation, grievances and appeals, and unionization and collective bargaining. Three credit hours.

**PADM 4341 Seminar: Comparative Public Administration**  
Prerequisite: senior standing. A seminar survey of similarities and differences in bureaucratic structures and processes. Analysis of the organization, staffing, and role of administrative systems in contrasting social and cultural contexts of the Western and nonWestern worlds. Dual-listed in the UALR Graduate Catalog as PADM 5341. Three credit hours.

**PADM 4353 Seminar in Budgeting**  
Prerequisite: POLS 1310. The course covers budgeting theory and practice. Topics include budgeting as allocations, process games, rituals, history, and politics. It examines institutions and their roles in budgeting as well as current issues such as uncontrollability, balanced budgets, and variance budgeting. Dual-listed in the UALR Graduate Catalog as PADM 5353. Three credit hours.
SCHOOL OF SOCIAL WORK

Bachelor of Social Work
The bachelor of social work program is a 55-hour major which provides the foundation for a professional career in social work. The program’s principle educational objective is to prepare students for beginning generalist social work practice within a liberal arts perspective to address the human service needs of individuals, families, groups, organizations, and communities.

A student can declare a social work major as early as his or her freshman year. Application for full admission into the program is made in the second semester of the sophomore year when the student is nearing completion of the core curriculum and language requirements. Other requirements for admission include an overall GPA of 2.0 and a cumulative GPA of 2.5 in the following prerequisite courses: SOWK 1301, SOCI 2300, and PSYC 2300. In addition, the application process requires a personal statement from the student and two letters of reference. Upon admission to the program, the student begins her or his professional social work training, which includes two semesters of experience in the field.

The bachelor of social work program is accredited by the Council on Social Work Education.

Bachelor of Social Work Degree Requirements

<table>
<thead>
<tr>
<th>Core Requirements¹</th>
<th>(44 hours)</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1401 Science of Biology</td>
<td></td>
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<tr>
<td>PSYC 2300 Psychology and the Human Experience</td>
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<tr>
<td>SOCI 2300 Introduction to Sociology</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Language Requirement²</th>
<th>(6 hours)</th>
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</thead>
<tbody>
<tr>
<td>SOWK 1301 Introduction to Social Work</td>
<td></td>
</tr>
<tr>
<td>SOWK 3302 Social Work and Diversity³</td>
<td></td>
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<tr>
<td>SOWK 3303 Human Behavior in the Social Environment I³</td>
<td></td>
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<tr>
<td>SOWK 3304 Human Behavior in the Social Environment II³</td>
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<tr>
<td>SOWK 3313 Social Welfare Policy²</td>
<td></td>
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<tr>
<td>SOWK 3314 Social Welfare Policy II³</td>
<td></td>
</tr>
<tr>
<td>SOWK 3315 Policy Practice</td>
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</tbody>
</table>

1. See "Core Requirements for Bachelor Degrees" on page 27.
3. To proceed in the BSW program, students must receive a grade of C or greater in this course.

<table>
<thead>
<tr>
<th>Required Social Work Courses</th>
<th>(47 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWK 1301 Introduction to Social Work</td>
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<tr>
<td>SOWK 3302 Social Work and Diversity³</td>
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<tr>
<td>SOWK 3303 Human Behavior in the Social Environment I³</td>
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<tr>
<td>SOWK 3304 Human Behavior in the Social Environment II³</td>
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<tr>
<td>SOWK 3313 Social Welfare Policy²</td>
<td></td>
</tr>
<tr>
<td>SOWK 3314 Social Welfare Policy II³</td>
<td></td>
</tr>
<tr>
<td>SOWK 3315 Policy Practice</td>
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</tbody>
</table>

| SOWK 3322 Methods of Social Work Research³ |
| SOWK 3331 Social Work Practice I³ |
| SOWK 3381, 3181 Social Statistics |
| SOWK 4333 Social Work Practice III³ |
| SOWK 4212 Field Seminar I³ |
| SOWK 4213 Field Seminar II³ |
| SOWK 4341 Field Experience I³ |
| SOWK 4342 Field Experience II³ |

<table>
<thead>
<tr>
<th>Other Required Courses</th>
<th>(6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3356 Developmental Psychology</td>
<td></td>
</tr>
<tr>
<td>RHET 3316 Writing for the Workplace</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
<th>(21 hours)</th>
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</thead>
<tbody>
<tr>
<td>Twelve hours upper-level electives in a field related to social work (see program advisor)</td>
<td></td>
</tr>
<tr>
<td>Six hours upper-level SOWK electives</td>
<td></td>
</tr>
<tr>
<td>Three hours unrestricted electives</td>
<td></td>
</tr>
</tbody>
</table>

4. To proceed in the BSW program, students must receive a grade of B or greater in this course.

Graduate Program in Social Work
The graduate program in social work leads to the MSW degree. The program can be completed in two years as a full-time student or in a period not to exceed four years as a part-time student, with the last two semesters being full time. The program is accredited by the Council on Social Work Education.

The curriculum supports advanced social work practice in clinical social work or management and community practice. Specific information about application requirements and course offerings can be found in the UALR Graduate Catalog.

Courses in Social Work (SOWK)

SOWK 1301 Introduction to Social Work
Historical background and description of social work in the areas of medicine, psychiatry, public assistance, social insurance, and community service, with emphasis on the function of the social worker, and professional standards and ethics. Three credit hours.

SOWK 3302 Social Work and Diversity
Prerequisite: Formal admission to social work major, SOWK 3303. Corequisite: SOWK 3331. Focus on the commonalities and diversities existing among groups in American society, and the nature of transactions between and within these groups. The purpose of the course is to use a strengths-perspective to increase students’ skills in working with people from diverse populations. The acquired knowledge, in concert with cross-cultural skills training, will be aimed at the development of culturally competent, generalist social workers who can practice in culturally diverse settings. Three credit hours.

SOWK 3303 Human Behavior in the Social Environment I
Prerequisites: SOWK 1301, formal admission to social work major. Part One of a sequence of two, this course is an examination of the interaction of the biological, psychological, and social factors that shape individual experiences and the underlying theories. Designed to give the student a broad understanding of how the human develops in his/her relationships within the family system and with the world around. It draws from theoretical perspectives in psychology, sociology, social psychology, biology, minority relations, and psychiatry. Three credit hours.

SOWK 3304 Human Behavior in the Social Environment II
Prerequisites: SOWK 3303; social work major. Part II of a two part sequence. An examination of the interaction of the biological, psychological, and social factors that shape individual experiences, and the underlying theories. Designed to give the student a broad understanding of how the human develops in his/her relationships within the family system and with the world around. It draws from theoretical perspectives in psychology, sociology, social psychology, biology, minority relations, and psychiatry. Three credit hours.
SOWK 3313 Social Welfare Policy
Prerequisites: SOWK 1301. Describes and analyzes the policies and services rendered by local, state, regional, and national agencies as well as the policy implications that impact social service delivery. The Code of Ethics charges social workers with the responsibility to act to prevent and eliminate discrimination by influencing change in policies that discriminate. Policy practice entails analyzing and influencing policies to promote social and economic justice. Social work majors. Three credit hours.

SOWK 3314 Social Welfare Policy II
Prerequisites: SOWK 3313; social work major or human services minor. Part II of a two-part sequence. A continuation of the description of policies and services rendered by local, state, regional, and national agencies with perspective of impact on social service delivery. Advocacy will be given greater attention in Part II. The Code of Ethics charges social workers with the responsibility to act to prevent and eliminate discrimination by influencing change in policies that discriminate. Entails analysis of and methods toward influencing policies to promote social and economic justice. Three credit hours.

SOWK 3315 Policy Practice
Prerequisites: SOWK 3313, SOWK 3314. Training student social workers to engage in policy practice. Oriented to the creation of the professional skills associated with policy action. Conceptualizes policy action as a series of skill areas that start with problem identification and analysis and conclude with policy proposal, action planning, and mobilization of political and public support. Three credit hours.

SOWK 3321 Social Welfare Problems and Programs
Prerequisite: SOWK 1301 recommended. Analysis of the development of social welfare as institutionalized response to social change, with emphasis on the dilemma of poverty in an affluent society. Three credit hours.

SOWK 3322 Methods of Social Work Research
Prerequisites: MATH 1302 or 1315, formal admission to social work major. An overview of the approaches to and uses of research in generalist social work practice. Emphasis placed on the practice-research link with a focus on conducting practice research, program evaluation within a social work agency setting. Ethical and human diversity issues are considered throughout the course.

SOWK 3323 Social Work with Children and Adolescents
Prerequisite: SOWK 1301 recommended. The areas of social work concerned with the well being and strengthening of young people, including protective services, family counseling, school social work, hospital social work, and juvenile justice. Three credit hours.

SOWK 3331 Social Work Practice I
Prerequisites: SOWK 3303 and declared major in social work. Co-requisite: SOWK 3302. This is the first course in a three-course practice sequence, introduces the student to therapeutic relationship building, interviewing, and client-system assessment. Primary objective of the sequence is to prepare students to engage in culturally-competent, family-centered practice which incorporates a strengths perspective needed for practice with individuals, families, groups, organizations, and communities. Three credit hours.

SOWK 3381, 3181 Social Statistics
Prerequisite: SOCI 2300. Recommended: MATH 1301 or equivalent. Basic statistical techniques and their corresponding theoretical premises, which are often used in statistical reasoning in sociology. Qualitative variables, characteristics of attributes, measures of their variation, correlation, and tests of significance are stressed. Three credit hours.

SOWK 4190 Independent Study
Prerequisites: SOWK 1301, formal admission to the BSW program, and consent of instructor. Advanced study and assignments in selected areas of social work. One, two, or three credit hours.

SOWK 4212 Field Seminar I
Prerequisites: SOWK 3331, social work major. Corequisite: SOWK 4341. An opportunity for the student to further integrate knowledge and insights developed in the classroom by exploring the field experience through the group process. The direct practice experience of assessment, intervention, and termination with evaluation provides the basis for student self-evaluation. The structure of the seminar provides for spontaneous and vicarious learning with structured assignments. Sessions are facilitated by a faculty coordinator. However, students take responsibility for presenting content and process. The group will take the leadership role. Two credit hours.

SOWK 4213 Field Seminar II
Prerequisites: SOWK 4212, social work major. Corequisite: SOWK 4342. Field Seminar II provides further opportunity for the student to integrate knowledge and insights developed in the classroom by exploring the field experience through the group process. The direct practice experience of assessment, intervention, and termination with evaluation provides the basis for student self-evaluation. The structure is similar to Field Seminar I. Two credit hours.

SOWK 4290 Independent Study
Prerequisites: SOWK 1301, formal admission to the BSW program, and consent of instructor. Advanced study and assignments in selected areas of social work. One, two or three credit hours.

SOWK 4308 Child Maltreatment Challenges in Practice
Prerequisite: SOWK 4323. An exploration of actual child welfare practice issues. Practice of essential skills is directly applied to the work which child welfare workers provide. Topics include thorough exploration of issues of diversity, ethical dilemmas, and value clarification. Full exploration of the challenging nature of practice within this context as well as the factors that contribute to the continued oppression of the system’s clients. Dual-listed in the UALR Graduate Catalog as SOWK 5308. Three credit hours.

SOWK 4323 Child Maltreatment Challenges in Society
Prepares students to work in the area of child welfare and provides information to enhance student’s knowledge and understanding of child maltreatment. Topics include types of child maltreatment, legal and medical issues, short and long term effects of maltreatment, and treatment methodologies appropriate with diverse populations. Dual-listed in the UALR Graduate Catalog as SOWK 5323.

SOWK 4332 Social Work Practice II
Prerequisites: SOWK 3331, social work major. The second in the three-course sequence, this course builds on the foundation interviewing and client-system assessment skills presented in Practice I and the various intervention skills to be used with individuals, groups, communities, and in family-centered practice. This course builds on the foundation of the introductory course. Practice I and Practice II. Practice III introduces methods for terminating a client from service by focusing on final empowerment strategies and strategies for program and practice evaluation. The focus on program and practice evaluation, in correlation with social work values, will integrate research methods into the professional world of practice. Skills learned in this course will also help to prepare the student for supervisory and managerial positions within the agency arena and are integrated with actual practice experience through the SOWK 4342 Field Experience I and SOWK 4213 Field Seminar I. Three credit hours.

SOWK 4341 Field Experience I
Prerequisites: SOWK 3331, social work major. Corequisite: SOWK 4332. Enrollees must be social work majors. Field Experience I is the first of two opportunities for the student to integrate knowledge and insights developed in the classroom into practice by working directly with the client system under careful supervision of a social worker in a human services agency, either public or private. Field Experience I provides a structured learning environment in which the student can develop an understanding of the values and ethics of social work and begin to develop the skill to apply them. The Field Experience I is 200 hours of direct practice experienced in the fall semester of the senior year. Three credit hours.

SOWK 4342 Field Experience II
Field Experience II is the second of two opportunities for the student to integrate knowledge and insights developed in the classroom into practice by working directly with the client system under careful supervision of a social worker in a human services agency, either public or private. Field Experience II provides a structured learning environment in which the student can demonstrate an understanding of the values and ethics of social work and begin to develop the skill to apply them. The Field Experience II is 200 hours of direct practice experienced in the spring semester of the senior year. Three credit hours.

SOWK 4350 Program Evaluation
Prerequisite: SOCI 2300 or POLS 2301. This course will focus on the concepts underlying models of program evaluation as well as methods of measuring program effectiveness in human service organizations and agencies. Students learn how to write effective mission statements, goals and objectives; use program logic models as framework for evaluation; use quantitative (but not statistical) assessment techniques; write effective evaluation reports; and apply evaluation findings to program improvement. Three credit hours.

SOWK 4390 Independent Study
Prerequisites: SOWK 1301, formal admission to the BSW program, and consent of instructor. Advanced study and assignments in selected areas of social work. One, two or three credit hours.

146 School of Social Work
DEPARTMENT OF SPEECH COMMUNICATION

SPCH 237
569-3158
569-3196 (fax)
Chairperson:
Ulmer, Robert, associate professor
Professor:
Thompson, Carol L.
Associate Professors:
Driskill, Gerald W., Ulmer, Robert
Assistant Professors:
Gallicks, Kristen
Lyon, Alexander
Metcalf, Laurie
Mirivel, Julian
Thombre, Avinash
Instructors:
Douglas, Michelle
Johnston, Cheryl
Lowry, Martha T.
McIntyre, JJ
Sandor, Sherrie

The department develops the knowledge, appreciation, and skills that contribute to the full understanding and practice of effective interpersonal and organizational communication.

Core Course in Speech Communication
The department offers SPCH 1300, which is a part of the UALR core curriculum. The course helps fulfill the written and oral literacy requirement. Students who feel they already possess the competencies developed in SPCH 1300 may attempt to complete the course requirement by testing out. For information about test dates, required fees, and test content, students should contact the Office of Testing Services and Student Life Research. A student who successfully tests out will receive three credit hours towards graduation and a grade of Credit (CR). SPCH 1300 is a prerequisite for all other courses in the department.

Major in Speech Communication
This curriculum is designed to meet the needs of students with an interest in communicative behavior in business, education, industry, and other professions. Students are trained in interpersonal and public communication skills related to human relations and organizational communication. The major requires 34 credit hours beyond SPCH 1300, including SPCH 2310, 2311, 3320, 4300, and 4110; nine hours from 3316, 3322, 3323, 3330, 3340, and 4311; and fifteen upper-level hours in a speech communication. Recommended minors for this curriculum are psychology, management, journalism, professional and technical writing, human services, and general business. Potential majors may secure an advisor by contacting the department. A grade of C or greater must be attained to fulfill a course requirement for the major.

Admission requirements include successful completion of at least 12 semester hours with a GPA of at least 2.00, RHET 1311, and SPCH 1300 with a minimum grade of C.

Minor in Speech Communication
The minor in speech communication requires 18 hours beyond SPCH 1300, including SPCH 2310, 3320, and 12 upper-level hours in speech communication.

Minor in Professional Communication
The minor in professional communication is designed to enhance communication skills necessary for success in a student’s chosen career. The minor requires 18 hours beyond SPCH 1300, including SPCH 2310, 3320, nine hours from 3316, 3322, 3323, 3330, 3340, and 4311 and 3 additional upper-level hours in speech communication.

Graduate Program
The department offers a master’s degree in interpersonal and organizational communication. See the UALR Graduate Catalog for details.

Speech Communication Education
Students seeking secondary teacher licensure in speech communication should contact an advisor in the department. See “Secondary Teacher Licensure” on page 45.

Courses in Speech Communication (SPCH)

SPCH 1300 Speech Communication
This course helps students effectively deliver an oral presentation to an adult audience; listen to and critique objectively the oral presentations of others; effectively participate in one-to-one communication experiences using techniques of active listening, conflict resolution, and information gathering; organize, participate in, and lead small groups as they problem-solve; and recognize and use effective oral language as a tool of sound reasoning. Student performance is emphasized along with lecture, discussion, and self-instructional study center exercises. Students learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Three credit hours.

SPCH 2314 Listening
Prerequisite: SPCH 2310. An introduction to the knowledge, theory, and skills needed to improve listening. Extensive exercises and tests to promote the learning of productive listening techniques, note taking, and types of listening skills. One credit hour.

SPCH 2140 Applied Communication Ethics
Prerequisite: SPCH 2310. Analysis of ethical issues in communication at multiple levels (interpersonal, small group, organizational, and public speaking). The course offers situations in which students consider the implications of ethical decision making, respond to ethical alternatives and discuss the effects of various responses. One credit hour.

SPCH 2310 Human Communication Concepts
Prerequisite: SPCH 1300. This course provides an overview to the study of human communication. A number of contemporary approaches to human interaction in interpersonal, small group, organizational, and intercultural situations are reviewed. The focus is on learning the basic terminology and theoretical concepts associated with the general study of communication. Three credit hours.

SPCH 2311 Introduction to Communication Research
Prepares students to understand the research and application focus of a major in communication. Topics include asking good research questions, the role of case studies in communication research, and understanding basic research principles. The focus of this course is to enable students to apply theory in meaningful ways to better understand real life situations. Three credit hours.

SPCH 3121 Parliamentary Procedure
Prerequisite: SPCH 1300. Principles of parliamentary procedure as used in most business and social organizations. Programmed cognitive learning and simulated practice in mock meetings. One credit hour.

SPCH 3300 Interpersonal Communication
Prerequisite: SPCH 1300. Enhances the student's ability to understand and participate in effective interpersonal communication. Topics include verbal and nonverbal communication, relational management, self-concept, and relationship roles. Focus on using major interpersonal theories and concepts, as well as in-class activities to develop a heightened awareness of relationship issues, as well as interpersonal communication competence.
SPCH 3315 Gender Communication
An examination of gender as it influences verbal and nonverbal interaction between men and women. Topics include the ways communication in families, schools, media, and society creates and perpetuates gender roles, and how socially-created gender differences in public and private setting affect success, satisfaction, and self-esteem. Focus on using major gender communication theories and concepts to develop a heightened awareness of gender issues that relate to human interaction. Three credit hours.

SPCH 3316 Interviewing
Prerequisite: SPCH 1300. This course develops the student’s ability to effectively prepare for and participate in a variety of interview situations. Topics include impression management, rapport building, interview organization, effective questions and answers, and effective listening. Types of interviews covered include employment, probing, survey, persuasive, selection, performance, counseling, and health care. The focus is on using in-class activities to develop effective interview skills. Three credit hours.

SPCH 3320 Advanced Public Speaking
Prerequisite: SPCH 1300. This course develops the student’s ability to effectively prepare and deliver a speech. Topics include audience analysis, critical thinking and listening, the use of supporting materials and visual aids, and the development of presentation skills. The focus is on using in-class activities to develop effective research, organization, and presentation skills. Three credit hours.

SPCH 3322 Small Group Communication
Prerequisite: SPCH 1300. This course develops the student’s ability to effectively communicate in small groups or teams. Topics include group formation, group leadership, effective speaking in group situations, effectiveness, group norms, effective group participation, and management of group conflict. The focus is on using in-class and group activities to develop effective small-group interaction skills and group presentation skills. Three credit hours.

SPCH 3323 Conflict Management
Prerequisite: SPCH 1300. Development of the student’s ability to effectively manage conflict in organizations, groups, and personal relationships. Topics include theories, styles, patterns, and systems of conflict as well as conflict management techniques of negotiation, and mediation. The focus is using in-class activities to better understand the factor and dynamics of conflict resolution and develop effective conflict management skills. Three credit hours.

SPCH 3330 Professional Communication
Prerequisite: SPCH 1300. Development of the student’s ability to effectively interact in professional business situations. Topics include listening, coaching/mentoring, dealing with difficult people, delegation, formal and informal communication, and customer service. Focus on using in-class activities to develop effective professional communication skills. Three credit hours.

SPCH 3340 Communication Ethics for the Professional
Prerequisite: SPCH 1300. This course explores the common ethical questions encountered in business and professional settings. Topics include whistle blowing, employee rights, public relations, ethical codes, sexual harassment, leadership ethics, and organizational legitimacy. The focus is on illustrating the importance of ethics to the professional through practical applications of communication-based principles. Three credit hours.

SPCH 3350 Nonverbal Communication
Prerequisite: SPCH 1300. Examination of codes of nonverbal communication within personal, interpersonal, and professional contexts. Topics include the functional perspective of nonverbal communication; factor of appearance, body language, space, touch, paralanguage, artifacts, and time; interpersonal attractiveness; credibility, dominance; and impression management. Focus on using major nonverbal communication theories and concepts to develop a heightened awareness of the role of non-verbs in human interaction. Three credit hours.

SPCH 4110 Senior Presentation
Prerequisite: SPCH 4300. Development and presentation of a major work done in the senior seminar. Part of the speech communication major capstone sequence. One credit hour.

SPCH 4100, 4201 Independent Study
Prerequisite: SPCH 1300. These courses provide students with an opportunity to read and conduct research in a selected area of speech communication studies. Projects and papers must be approved by the instructor prior to registration. One or two credit hours.

SPCH 4200 Senior Seminar
Prerequisites: SPCH 2310, Speech 2310, and 15 hours in speech communication. Application of human communication theory to real situations. Topics include researching the communication literature, organizing arguments, analyzing communication events, and deriving practical implications from communication theory. Focus on applying a specific communication theory to a specific real-life situation. Part of the speech communication major capstone sequence. Three credit hours.

SPCH 4310 Investigations into Communication Research
Prerequisite: SPCH 1300 and 4300. Examination of the applied role of communication research methods in a variety of contemporary organizations. Topics include both quantitative and qualitative research approaches, as well as questions of research ethics. Focus on identifying the practical applications of research methods for organizational members. Dual-listed in the UALR Graduate Catalog as SPCH 5310. Three credit hours.

SPCH 4311 Organizational Communication
Prerequisite: SPCH 2310. Examination of organizational communication theories, communicative implications of historical and modern management theories, as well as special interest topics. Major topics include cultural and critical approaches to organizational communication, classical management and human relations theory, and currently effective theories. Special topics may include teams in organizations, diversity, organizational politics, leadership and change. Focus on applying organizational communication theories and concepts to understand others better and to control one’s own communication in organizations. Dual-listed in the UALR Graduate Catalog as SPCH 5312. Three credit hours.

SPCH 4312 Intercultural Communication
Prerequisites: SPCH 1300. Examination of culture as it influences human interaction in a wide range of contexts, including work, medical, interpersonal and political. Topics include culture shock, language, nonverbal, intercultural conflict, and culture and the media. Focus on using major intercultural communication theories and concepts, as well as in class activities to develop a heightened awareness of intercultural issues, as well as intercultural communication competence. Dual-listed in the UALR Graduate Catalog as SPCH 5312. Three credit hours.

SPCH 4313 Seminar: Topics in Communication
Prerequisites: SPCH 2310. Investigation of timely communication theories, skills, and practices. Topics selected from a variety of theoretical or practical perspectives. Focus is on an in-depth treatment of a topical area not typically represented in other courses in the major. May be repeated for credit. Dual-listed in the UALR Graduate Catalog as SPCH 5313. Three credit hours.

SPCH 4314 Internship
Prerequisites: SPCH 1300. An opportunity to apply communication concepts and skills in a professional setting within the department. Interns gain experience working in the Speech Communication Interactive Learning Center, assisting in its operation primarily with students in the basic course. Focus is on experiencing and analyzing communication in real-world situations. Contact the department’s internship coordinator before enrolling in this course. Three credit hours.

SPCH 4315 Cooperative Education in Speech Communication
Prerequisite: SPCH 1300. An opportunity to apply communication concepts and skills in a professional setting outside the department. Focus us on experiencing and analyzing communication in real-world situations. Contact the department’s coordinator of cooperative education before enrolling in this course. Three credit hours.

SPCH 4320 Public Address: Speakers and Audiences
Prerequisite: SPCH 2310. History and criticism of United States speakers and speeches that reflect dominant social and political ideas in United States history. Three credit hours.

SPCH 4321 General Semantics
Prerequisite: SPCH 2310. Comprehensive examination of the way human beings use word symbols to define themselves, verbally map their environment, describe the past, and project the future. Study of the distortions that can occur between symbolic representation and actual events, the impact of this disparity on human behavior, and the means of adjustment. Survey of the origins of spoken symbols and the process of developing symbol systems. Three credit hours.

SPCH 4323 Family Communication
Prerequisite: SPCH 1300. Examination of long-term relationships within a family context from a speech communication perspective, primarily examining behaviors that occur in a functional family. Topics include family rules and roles, conflict styles, power, and decision-making. Focus is on using major family communication theories and concepts to help the student analyze the communication system of a family and identify communication patterns, problems, and dilemmas in the families. Three credit hours.

SPCH 4324 Organizational Communication II
Prerequisite: SPCH 1300. Special topics in organizational communication including but not limited to organizational identification, risk and issue management, organizational change, or critical approaches to organizational communication. Focus on giving students an in-depth understanding of a specialized aspect of organizational communication. Dual-listed in the UALR Graduate Catalog as SPCH 5324. Three credit hours.

SPCH 4550 Effective Crisis Communication
This course investigates and analyzes instances of effective and ineffective crisis communication. Students will examine the internal organizational processes and the larger environment within which various organizations exist focusing on issues such as stakeholders, legal environments, and the larger social and cultural contexts. Dual-listed in the UALR Graduate Catalog as SPCH 5550. Five credit hours.
MIDSOUTH CENTER

MidSOUTH Center
PP 103
569-3067
569-3364 (fax)

Executive Director:
Bryan, Joe B.

IT Director:
Besag, C. Brett

Projects and Development
Director:
Griffin, Carol M.

Training Director:
Broome, John R.

Director of Field Education:
Blonsky, Gary A.

MidSOUTH is a community service and outreach agency. Begun in 1973, MidSOUTH is a dynamic organization, responsive to local and state needs for education, training, evaluation, and professional services. Three decades of community service defines MidSOUTH’s leadership in demonstrating and promoting best practice standards for services, program and workforce development, technology usage, and responsible and responsive public policy related to human services.

All MidSOUTH programs provide collaborative linkages from the academic community to public agencies, business, and non-profit community agencies in Arkansas. Statewide services are maintained through facilities in Little Rock, Arkadelphia, Fayetteville, Jonesboro, and Monticello. A network of seven compressed interactive video sites and various internet related resources further facilitate the outreach and service capabilities of MidSOUTH.

MidSOUTH Statewide Programs

MidSOUTH Summer School on Alcohol and Other Drug Abuse Problems® (MSSS®), begun in 1974, is a national educational event that brings over a thousand participants to the UALR campus for a week each June. National and local experts in substance abuse, the family, and prevention provide participants over 30 hours of professional continuing education hours.

MidSOUTH Training Academy provides training for the child welfare service workforce in Arkansas. New staff training and continuing education are provided for the staff, foster parents, and adoptive parents of the Arkansas Division of Children and Family Services (DCFS). Continuing education on a broad range of topics is provided for individuals and organizations serving children and families. Educational stipends for BSW, MSW and select multidisciplinary students who agree to go to work for DCFS are available.

MidSOUTH Addiction Training Network is a workforce development program that provides professional continuing education related to substance abuse and treatment.

MidSOUTH Prevention Institute provides training and technical assistance in the latest trends in prevention technology for a variety of disciplines and organizations.

MidSOUTH’s Arkansas Conference on Child Abuse and Neglect is an annual state and regional event for professionals dealing with maltreatment of children. National and local experts in child maltreatment investigation, prosecution, treatment and services provide three days of continuing education for a broad range of disciplines.

Arkansas Substance Abuse Certification Board (ASACB) is housed on the UALR campus and is provided administrative support through MidSOUTH. ASACB acts to develop, test, and certify counselors and supervisors in the field of substance abuse.
The College of Science and Mathematics (CSAM) is the home of instruction and research in the many fields of science, mathematics, health science and nursing. Our goals are to enhance the educational opportunities for undergraduate and graduate students, to enhance science and mathematics education in Arkansas, to expand research opportunities for faculty and students, and to strengthen our many partnerships with schools, corporations and government in order to improve the economic strength of our region.

The College provides coursework for preparation of graduates in mathematics, the sciences, the health sciences and nursing. The objectives of CSAM for our majors are to provide content, attitudes, and skills necessary for careers in science, mathematics, health science, and nursing needed to meet the highly technical demands of today’s society. Within our graduate programs, we provide advanced training for persons who expect to pursue a career in one of these fields. In addition, many courses within CSAM are necessary within general education requirements and for certain other majors throughout the University.

The curriculum of each department is designed to attain these objectives. Introductory courses in astronomy, biology, chemistry, geology, health sciences, mathematics and statistics, and physics are designed to meet the needs of all college students. Advanced courses in these fields of study are arranged in scope and sequence, and lead to increased competence in specialized fields. Graduates of our programs are able to move directly into employment or to seek additional educational degrees through graduate education.

An associate degree is offered in nursing Baccalaureate degrees are offered with majors in biology, chemistry, environmental health sciences, geology, health professions, health sciences, mathematics, and physics. Minors are offered in those areas and in astronomy, statistics and nursing. In addition, many other pre-professional curricula are administered within the college. Some of these are dentistry, medicine, nursing, pharmacy, physical therapy, and veterinary medicine. Opportunities for study in marine science are provided by UALR’s affiliation with the Gulf Coast Research Laboratory, Ocean Springs, Mississippi.

For graduate work leading to master’s degrees in biology, chemistry, health sciences, integrated science and mathematics, and applied mathematics, and the doctoral program available through applied science and bioinformatics, see the UALR Graduate Catalog.

Most departments in CSAM offer honors track options for students who are highly motivated, well-prepared, or especially able. Specific requirements are defined by the various departments. See departmental descriptions on the following pages of this catalog and/or contact the respective department chairpersons for details.

The college coordinates with the College of Health Related Professions (CHRP) of the University of Arkansas for Medical Sciences (UAMS) in providing the necessary pre-clinical curricula for many of the CHRP programs. Programs are coordinated between the two institutions and include all courses needed by students in the health-related professions.

The college has a number of scholarships available in the various program areas. For more information contact the departmental offices.

Students applying to a degree program in the College of Science and Mathematics must meet the admissions requirements of the department offering the degree. The department's section in this catalog identifies specific admissions criteria.

Pre-professional Studies

CSAM offers students pre-professional curricula for professional areas requiring a background in science or technology as well as in liberal arts. The associate dean and the college’s Premedical Advisory Committee advise students preparing to enter such programs. Since applications must be submitted approximately one year before the student enters a professional school, students should obtain information and advice about their programs of study as early as possible.

Advisement in the other pre-professional areas is available through the associate dean’s office in the Engineering Technology and Applied Sciences building (ETAS), room 125.

Premedical and Predental

The following courses meet the entrance requirements of most medical or dental schools. Students should consult with the medical or dental school of their choice for specific entrance requirements.

- BIOL 1401 Science of Biology
- BIOL 2403 Zoology
- BIOL 3300 Genetics
- CHEM 1402 General Chemistry I
- CHEM 1403 General Chemistry II
- CHEM 3350 General Organic Chemistry I
- CHEM 3150 Organic Chemistry Laboratory I
- CHEM 3351 General Organic Chemistry II
These are the minimum science courses required and will prepare the student for the Medical College Admissions Test (MCAT). Many medical or dental schools may require or recommend additional courses. The College of Medicine of the University of Arkansas for Medical Sciences requires the following courses for admission: two semesters each of biology, general chemistry, organic chemistry, mathematics (or through Calculus I), and physics; and Composition. A student considering entrance at another medical school should check that program’s specific entrance requirements.

Health Professions Degree
CSAM offers the student a bachelor of science degree in health professions upon completion of 94 credit hours in a premedical or preprofessional curriculum plus successful completion of one year (30 hours maximum) in an approved medical or dental school. The last 30 hours before the student enters medical or dental school must be completed at UALR.

Requirements in the health professions curriculum include the University’s core curriculum requirements and the following courses in biology, chemistry, and physics: BIOL 1401, 2403, and six hours of electives; CHEM 1401, 1402, 2310, 2311, 3150, 3250, 3151, and 3351; and PHYS 1121, 1321, 1122, and 1322.

Students interested in the health professions degree should consult the associate dean, Dr. Thomas J. Lynch, ETAS 125.

Audiology and Speech Pathology
See “Department of Audiology & Speech Pathology” on page 134 for the undergraduate and graduate curriculum in audiology and speech pathology in the College of Professional Studies in this catalog.

Biomedical Instrumentation Technology
This associate degree program is offered through the College of Health Related Professions at the University of Arkansas for Medical Sciences. Students may apply to the program directly out of high school but college level work is desirable. Recommended preparatory course work includes: RHET 1311 Composition I and 1312 Composition II, MATH 1302 College Algebra, HIST 2311 U.S. History, SPCH 1300 Speech Communication, SOCI 2300 Introduction to Sociology, and PSYC 2300 Psychology and the Human Experience.

Chiropractic
A candidate must have completed at least 60 credit hours leading to a baccalaureate degree, including laboratory courses in biology, chemistry, and physics. A grade point of 2.25 or greater is required, and no more than 20 hours may be acquired through CLEP or challenge examinations. Only non-science courses may be completed through credit by examination. The Council on Chiropractic Education, through its accrediting agency, requires that the following subject areas be completed in the pre-professional curriculum. This curriculum includes six hours of English, eight hours of biology with a laboratory, eight hours of inorganic chemistry with a laboratory, eight hours of organic chemistry with a laboratory, eight hours of physics with a laboratory, three hours of general psychology, three hours of sociology, 24 total physical sciences hours, and 24 total hours in the humanities or social sciences.

Additional course requirements vary with each chiropractic program. The student should obtain specific information from the school of his or her choice.

Cytotechnology
This program is offered by the College of Health Related Professions at the University of Arkansas for Medical Sciences. To be admitted a candidate must have completed a minimum of 84 semester credits, at least five of which must be upper-level (junior/senior) from an accredited college or university. The required courses include:

- English Composition (6 hours)
- College Algebra (3 hours)
- Biology or Zoology (20 hours)
- Fundamental Chemistry (8 hours)
- Fine Arts (3 hours)
- History of Civilization or World History (6 hours)
- Humanities (3 hours)
- U.S. History or American Government (3 hours)
- Social Sciences (6 hours)
- Speech Communication (3 hours)
- Electives (24 hours)

Dental Hygiene
A candidate must have completed at least 48 credit hours from an accredited college or university to be admitted to the dental hygiene program in the College of Health Related Professions at the University of Arkansas for Medical Sciences. The required courses include:

- CHEM 1400 Fundamental Chemistry I
- BIOL 1401 Science of Biology
- Microbiology (4 hours)
- College Algebra or higher mathematics (3 hours)
- Computer Fundamentals/Applications (3 hours)
- Fine Arts (3 hours)
- General Psychology (3 hours)
- History of Civilization (6 hours)
- Humanities (3 hours)
- Introduction to Sociology (3 hours)
- Speech Communication (3 hours)
- English Composition (6 hours)
- U.S. History or American Government (3 hours)

Diagnostic Medical Sonography
This program is offered by the College of Health Related Professions at the University of Arkansas for Medical Sciences. To be admitted, a candidate must have completed a minimum of 63 credit hours from an accredited college or university. The required courses include:

- English Composition (6 hours)
- Human Anatomy (4 hours)
- Human Physiology (4 hours)
- Introductory Physics (4 hours)
- Speech Communication (3 hours)
- College Algebra (3 hours)
- U.S. History or National Government (3 hours)
- History of Civilization (6 hours)
- Introduction to Sociology (3 hours)
- General Psychology (3 hours)
- Fine Arts (3 hours)
- Humanities (3 hours)
- Computer fundamentals/applications (3 hours)
- Electives (15 hours)

Emergency Medical Sciences
Emergency Medical Technician (EMT) and paramedic courses are offered by CHRP at UAMS. The EMT course is taught two nights a week for the duration of one semester. It is taught both fall and spring semesters and can be used as either an elective or in lieu of a first aid course. Successful completion allows the student to test for state certification. The paramedic course begins in August of each year for the duration of five semesters. Both certificate and associate degree tracks are available at the paramedic level.

- College Algebra (or higher level math) (3 hours)
- Computer Fundamentals/Applications (3 hours)
- English Composition (6 hours)
- Introduction to Sociology (3 hours)
- General Psychology (3 hours)
- U.S. History or American Government (3 hours)
- Speech Communication (2 hours)

Health Information Management
(Pharmacy Information Technology)
This program is offered by CHRP at UAMS. To be admitted, a candidate must have graduated from high school. There are no prerequisite courses, however the following courses must be completed at another institution such as UALR before the associate of science degree can be awarded. If the anatomy and physiology course is taken at another
institution a minimum of four credit hours is required and the course(s) must be comprehensive. The required general education courses required for the program are:

- College Algebra or College Math (3 hours)
- Computer Fundamentals/Applications (3 hours)
- English Composition (6 hours)
- U.S. History or American Government (3 hours)
- General Psychology (3 hours)
- Introduction to Sociology (3 hours)
- Speech Communications (3 hours)

**Medical Technology**

The Medical Technology program in CHRP at UAMS accepts students with a minimum of 69 credit hours. The premedical technology course work must include:

- College Algebra or higher math (3 hours)
- General Chemistry (8 hours)
- General Biology (BIOL 1401, 2403) (8 hours)
- Microbiology (4 hours)
- Anatomy and Physiology (4 hours)
- English Composition (6 hours)
- Speech Communication (3 hours)
- Fine Arts (3 hours)
- History of Civilization (6 hours)
- U.S. History or American Government (3 hours)
- Social Science (6 hours)
- Humanities (3 hours)
- Electives (12 hours)

**Nuclear Medicine Technology**

This program is offered by CHRP at UAMS. To be admitted, a candidate must have completed a minimum of 85 credit hours from an accredited college or university, eight credit hours of which must be junior/senior level. The required pre-professional courses include:

- Human Anatomy and Physiology (8 hours)
- Elementary Physics (4 hours)
- General Chemistry (8 hours)
- College Algebra (3 hours)
- Speech Communication (3 hours)
- English Composition (6 hours)
- History of Civilization (6 hours)
- Humanities (3 hours)
- U.S. History or American Government (3 hours)
- Fine Arts (3 hours)
- Social Sciences (6 hours)

**Optical Sciences Technology**

This program is offered by CHRP at UAMS. To be admitted, a candidate must have completed at least 55 credit hours from an accredited college or university. The course requirements include:

- English Composition (6 hours)
- History of Civilization (6 hours)
- U.S. History or American Government (3 hours)
- Social Science (6 hours)
- Speech Communication (3 hours)
- Fine Arts (3 hours)
- Humanities (3 hours)
- Biological Science Electives (9 hours)
- Anatomy and Physiology (8 hours)
- Microbiology (4 hours)
- Elementary Physics (4 hours)
- College Algebra or higher math (3 hours)

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1. Biology courses must be suitable for majors and must include laboratory credit in required courses. Biology electives must include four upper-level hours credit and no more than four hours credit of botany.

2. Depending if students have completed radiation therapy course work.
Pharmacy Suggested Curriculum

Mathematics (4 hours)
MATH 1451 Calculus I
or MATH 1311 Applied Calculus I

English/ Communication (9 hours)
RHET 1311 Composition I
RHET 1312 Composition II
RHET 3326 Technical Writing
ENGL 2335 Introduction to Literature
or RHET 2312 Sophomore Composition
or other, higher course
SPCH 1300 Speech Communication

Chemistry (16 hours)
CHEM 1402 General Chemistry I
CHEM 1403 General Chemistry II
CHEM 3350 General Organic Chemistry I
and CHEM 3150 Organic Chemistry Laboratory I
CHEM 3351 General Organic Chemistry II
and CHEM 3151 Organic Chemistry Laboratory II

Biology (8 hours)
BIOL 1401 Science of Biology
BIOL 2401 Microbiology
BIOL 2403 Zoology
BIOL 4422 Mammalian Physiology
BIOL 3402 Mammalian Anatomy

Physics (4 hours)
PHYS 1321 Elementary Physics I
and PHYS 1121 Elementary Physics I Laboratory

Economics (3 hours)
ECON 2322 Principles of Microeconomics
ECON 2323 Principles of Macroeconomics

Critical Thinking/Problem Solving (6 hours)
ACCT 1310 Introduction to Accounting and Taxation
CHEM 2310 Analytical Chemistry I
MATH 1452 Calculus II
or MATH 1312 Applied Calculus II
STAT 2350 Introduction to Statistical Methods
PHYS 1322 Elementary Physics II
and PHYS 1122 Elementary Physics II Laboratory
PHIL 1330 Introduction to Critical Thinking

Humanities Electives (65 hours)
Choose from survey courses in art, music, theater, literature,
philosophy, religion, second language, sign language, psychology,
sociology, anthropology, US or world history, political science,
ethics, and/or geography.

Physical Therapy
The physical therapy programs in Arkansas are located at the
University of Central Arkansas (UCA) and Arkansas State University
(ASU). Both programs are graduate level. UCA’s program is a doctoral
program and ASU’s is a master’s program. Each requires a baccalaureate
degree for admission plus specific course requirements. Students
interested in either program should request admissions materials directly
from the program and during their undergraduate career at UALR seek
advisement from an advisor in the Department of Biology or the dean’s
office in the College of Science and Mathematics.

Radiation Therapy
This program is offered by Central Arkansas Radiation Therapy
Institute and CHRP at UAMS. To be admitted, a candidate must have
completed a minimum of 39 semester credits in general education and 38
semester credits in radiography from an accredited college or university.
The professional curriculum consists of 47 semester hours of upper-level
courses. Upon completion of these requirements, the student is awarded a
Bachelor of Science in Radiation Therapy.
- College Algebra (3 hours)
- Anatomy and Physiology (4 hours)
- English Composition (6 hours)
- U.S. History or American Government (3 hours)
- General Psychology (3 hours)
- Introduction to Sociology (3 hours)
- Speech (2 hours)
- Computer Fundamentals/Applications (3 hours)
- Fine Arts (3 hours)
- History of Civilization (6 hours)
- Humanities (3 hours)

Radiologic Technology
This program is offered by CHRP at UAMS. To be admitted a
candidate must have completed a minimum of 32 credit hours from an
accredited college or university. The required pre-professional courses
include:
- English Composition (6 hours)
- College Algebra (3 hours)
- Human Anatomy and Physiology (8 hours)
- General Psychology (3 hours)
- Introduction to Sociology (3 hours)
- Speech Communication (3 hours)
- Computer Fundamentals/Applications (3 hours)
- U.S. History or American Government (3 hours)

Respiratory Care
This program is offered by CHRP at UAMS. Both a bachelor of
science and an associate of science degree are available. The bachelor of
science degree may be completed in either Little Rock or Texarkana. To be
admitted, to the bachelor of science program a candidate must have
completed a minimum of 66 credit hours from an accredited college or
university. The required pre-professional courses include:
- English Composition (6 hours)
- College Algebra (3 hours)
- Human Anatomy and Physiology (8 hours)
- Fundamental Chemistry (8 hours)
- Physics (4 hours)
- Microbiology (4 hours)
- Speech Communication (3 hours)
- U.S. History or American Government (3 hours)
- Computer Fundamentals/Applications (3 hours)
- General Psychology (3 hours)
- Introduction to Sociology (3 hours)
- History of Civilization (6 hours)
- Humanities (3 hours)
- Fine Arts (3 hours)
- Electives (6 hours)

Surgical Technology
This program is offered by CHRP at UAMS. To be admitted a
candidate must have completed a minimum of three semester credit hours
from an accredited college or university. The required prerequisite is four
hours of human anatomy and physiology.
Candidates pursuing an associate degree must complete an
additional 29 semester credit hours. The required courses are:
- Computer Fundamentals/Applications (3 hours)
- College Algebra or higher math (3 hours)
- English Composition (6 hours)
- Speech Communication (3 hours)
- U.S. History or American Government (3 hours)
- Introduction to Sociology (3 hours)
- General Psychology (3 hours)
Electives (5 hours)
For specific details on the time requirement to complete courses for the associate degree, contact the chairperson of the Department of Surgical Technology at UAMS.

Veterinary Medicine
Admission requirements to colleges of veterinary medicine are similar to those listed for medicine. However, admission requirements vary. Students interested in such programs should correspond directly with the colleges of their choice and identify specific requirements early in their undergraduate studies.
DEPARTMENT OF BIOLOGY

Biology is a diverse discipline, the study of which allows entry into fields such as biotechnology, cell biology, conservation, ecology, physiology, environmental sciences, and the many aspects of the health-related sciences. The biology department includes faculty, course work, and programs in the traditional area of biology, fisheries and wildlife management, molecular biotechnology, secondary education, and environmental health science. The biology department offers two degree programs: BS in biology and BS in environmental health sciences.

Students in both degree programs benefit from extensive laboratory experience that provides hands-on use of modern laboratory and field equipment. Through an affiliation with the Gulf Coast Research Laboratory at Ocean Springs, Mississippi, the department offers a variety of courses in marine biology. Furthermore, abundant opportunities allow specialized learning through undergraduate research, internships, cooperative education, and practicums. Student organizations for both degree programs provide opportunities for recreational, service, and career-oriented activities in which students and faculty interact informally.

Within the biology curriculum, the department offers courses that serve several objectives: to provide students with an understanding of basic biological principles and their importance in society; to provide a pre-professional background for students preparing to enter medicine, dentistry, veterinary medicine, and other professional fields; to provide a strong academic background for students entering careers immediately after the completion of their undergraduate degree; and to provide the breadth and depth of background needed to succeed in a graduate program.

A student pursuing the BS in biology may select from four concentrations: general biology, fisheries and wildlife management, molecular biotechnology, and secondary education. A minor in biology is also offered.

Admission Requirements

Students who select biology as their major must have completed at least 15 credit hours at UALR, have a cumulative grade point average of 2.00 or greater on all course work at UALR, and have taken BIOL 1400 or BIOL 1401 (or equivalent) with a grade of C or greater.

Students who entered UALR conditionally by contract must complete the contract before being eligible for admission to the biology program. Decisions regarding course equivalency and situations in which students have tested out of courses or transferred credit from other programs will be made by the department chairperson. Transfer students with 30 hours or more in transfer credit may be accepted into the biology degree program with fewer than 15 hours at UALR with the approval of the department chairperson.

Honors Program in Biology

The department offers an honors program to provide qualified students the opportunity to pursue advanced study and receive appropriate recognition. Interested students should apply to the department chairperson for admission.

Participants in the honors program are selected by the department faculty on the basis of these criteria: (1) junior standing, (2) minimum cumulative GPA of at least 3.25, and (3) acceptance by a faculty member for participation in a research project.

To complete the honors program a student must: (1) maintain the 3.25 GPA, (2) enroll in undergraduate research courses for a minimum of two semesters, (3) complete a minimum of three credit hours and a maximum of six hours of undergraduate research, and (4) present the results of the undergraduate research project at an honors seminar as well as submit a written report approved by the faculty supervisor to the department faculty.

Gulf Coast Research Laboratory

The University of Arkansas at Little Rock is affiliated with the Gulf Coast Research Laboratory at Ocean Springs, Mississippi. Through this arrangement students receive UALR credit for courses taken at the research laboratory during the 12-week summer teaching session, which usually begins the first full week in June each year. The summer session consists of two terms, although the length of some classes varies. Students register and pay tuition on the UALR campus and have their credit transferred to this campus for inclusion in their academic records.

Students who want to take courses in this program must apply by May 1 for summer enrollment and have prior approval of their department chairperson or the on-campus coordinator. For more information or application forms, contact the chairperson, Department of Biology.

Major in Biology – General Biology Concentration

Students selecting this concentration must complete 40 credit hours in biology and satisfy the following requirements.

Biology Core

BIOL 1400 Evolutionary and Environmental Biology
or BIOL 1401 Science of Biology
BIOL 2401 Microbiology
BIOL 2402 Botany
BIOL 2403 Zoology
BIOL 3300 Genetics
BIOL 3303 Principles of Ecology
BIOL 4190 Biology Seminar

Students must achieve a C or greater in each of these courses to complete the core requirements.

Biology electives: 17 hours, which must include at least three courses with laboratories either as part of the course or as a separately numbered laboratory course. Students may choose these electives from the remaining biology course offerings on the basis of individual preference or need. Students choosing to specialize further may select an emphasis in botany, cell biology and physiology, ecology, or zoology.

Additional requirements: Students must complete at least eight hours of freshman chemistry, four hours of organic chemistry, six hours of physics (1321 and 1322 or equivalent) and three hours of computer science or statistics. A minor is also required.

Fisheries and Wildlife Management Concentration

This concentration is designed to prepare students studying conservation biology for research or management positions with federal, state, or other agencies, such as the U.S. Fish and Wildlife Service, state game and fish departments, and national and state parks. The curriculum is also designed to prepare students to enter graduate programs in fish and wildlife management and meets the certification requirements of the American Fisheries Society and the Wildlife Society.
This program of courses is a major-minor combination; no separate minor field is required. Requirements for this concentration:

1. Biological Sciences: A total of 60 hours is required. The following must be included:
   a. Biology Core: 23 hours (as outlined above)
   b. Wildlife and Fisheries Management: 10 hours
      - BIOL 4308 Wildlife Management
      - BIOL 4309 Wildlife Management Techniques
      - BIOL 4410 Fisheries
   c. Wildlife and Fisheries Biology: minimum of 8 hours from the following courses:
      - BIOL 4402 Limnology
      - BIOL 4404 Mammalogy
      - BIOL 4405 Ichthyology
      - BIOL 4407 Herpetology
      - BIOL 4411 Ornithology
   d. Basic Botany: minimum of 8 hours to include:
      - BIOL 4412 Plant Ecology and BIOL 3411 Dendrology or
      - BIOL 4409 Plant Taxonomy
   e. Other Biology: minimum of 11 hours to include:
      - BIOL 4305 Animal Behavior
      - Electives (8 hours)

2. Physical sciences: Courses such as chemistry, physics, and earth science with at least two disciplines represented. A minimum of 12 hours, including at least four hours of chemistry, is required. These courses may also be used to satisfy University lab science core requirements.

3. Quantitative sciences: Twelve hours are required.
   a. Basic Quantitative Sciences: College Algebra and a minimum of three hours of calculus are required.
   b. Applied Quantitative Sciences: Courses in basic statistics, biometry, sampling, computer science, or other quantitative science. A minimum of six hours is required.

4. Communications: Courses designed to improve communication skills such as English composition, technical writing, journalism, public speaking, or use of mass media. A minimum of three hours is required above the University core requirements of English composition and speech.

5. Policy, administration, and law: Courses such as resource policy and/or administration, environmental law, or natural resources/land use planning. A minimum of six hours is required; most of these courses do not fulfill the University core requirements. The following courses are suggested:
   - CRJU 2300 Introduction to Criminal Justice
   - CRJU 3301 Criminal Evidence
   - CRJU 3302 Legal Aspects of Law Enforcement
   - PADM 3331 Public Administration
   - ENHS 3310 Environmental Regulations
   - ENHS 3415 Environmental Impact Analysis
   - ENHS 4410 Environmental Planning
   - POLS 3310 Policy Process
   - POLS 3325 Legislative Process and Behavior

**Molecular Biotechnology Concentration**

This concentration is a joint effort between the biology department at the UALR and the medical technology department of the UAMS. The curriculum is designed for students who want to pursue a research career in molecular biotechnology at the bachelor's level (this program is not intended as a premedical or pre-professional curriculum). This concentration will prepare students for technical occupations in basic and applied molecular biotechnology research and positions with federal and state governmental agencies and private or commercial enterprises that conduct either basic or applied research in biotechnology.

The concentration is divided into two levels: a four-semester Pre-Biotechnology Curriculum that leads to admission to the Molecular Biotechnology Research Program (MBRP) which is a joint curriculum between UALR and UAMS. Completion of the Pre-Biotechnology Curriculum and candidacy to the MBRP requires a minimum of 60 hours including BIOL 2401, 2402, 2403, and 3300; eight hours of general chemistry; four hours of organic chemistry; and a minimum GPA of 2.60. Students transferring to UALR who wish to apply to the MBRP may substitute transferring courses for these requirements with the approval of the Molecular Biotechnology Research Committee. Admission to the MBRP will be competitive, based on the student's cumulative GPA, an interview with the Molecular Biotechnology Research Committee, and two faculty recommendations. Each fall, a maximum of 20 students meeting these requirements will be admitted to the program.

This program of courses is a major-minor combination; no separate minor field is required. Requirements for this concentration are as follows in the column to the right.

1. Biological Sciences: A total of 56 hours is required including the following:
   a. Biology Core: 23 hours
   b. UALR Biotechnology (8 hours)
      - BIOL 4417 Molecular Biology
      - BIOL 4418 Biotechnology
   c. Upper-level Biology Electives (12 hours)
      A recommended course list is available from the Department of Biology
   d. UAMS Biotechnology (13 hours)
      - BIOM 3210 Laboratory Principles and Techniques
      - BIOM 3211 Introduction to Research
      - BIOM 4305 Cell Culture Principles and Techniques
      - BIOM 4106 Technology Transfer
      - BIOM 4507 Biotechnology Laboratory Internship

2. Physical Sciences, Mathematics, and Computation (24 hours):
   a. Chemistry (12 hours)
      - CHEM 1400 Fundamental Chemistry I or CHEM 1402 General Chemistry I
      - CHEM 1401 Fundamental Chemistry II or CHEM 1403 General Chemistry II
      - CHEM 2450 Organic Chemistry-Short Course
   b. Physics (6 hours)
      - PHYS 1321 Elementary Physics I
      - PHYS 1322 Elementary Physics II
   c. Mathematics (3 hours)
      - MATH 1302 College Algebra
   d. Computer Science (3 hours)
      - CPSC 1370 Computer Literacy or equivalent course

Emphasis areas generally have fewer course options than standard majors so it is strongly suggested that students interested in this program declare a biology major and seek counseling in the Department of Biology as early as possible. The following model curriculum depicts a selection and sequence of courses that is strongly recommended.

**Secondary Teacher Licensure**

This concentration is designed to prepare students for teacher licensure in secondary education. Biology is the major emphasis and earth science the secondary emphasis (as prescribed by Arkansas law). A minor in secondary education is required. See “Secondary Teacher Licensure” on page 45 for more information, and contact the Department of Biology for academic advising.

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1. With permission, certain courses from the Gulf Coast Research Laboratory may be substituted.
2. Students must achieve a C or greater in each core course to complete the core requirements.
3. It is strongly recommended that BIOL 4415 Biometry and BIOL 4421 Introduction to Geographic Information Systems (GIS) be included.
4. Students must achieve a C or greater in each core course to complete the core requirements.
Minor in Biology
A minor in biology requires 20 hours of credit in biology courses to include BIOL 1400 or 1401, a minimum of eight hours from sophomore level courses and eight additional hours, at least three of which must be upper level.

Molecular Biotechnology Concentration Recommended Sequence

First Semester (17 hours)
- RHET 1311 Composition I
- MATH 1302 College Algebra
- BIOL 1401 Science of Biology or BIOL 1400 Evolutionary and Environmental Biology
- CHEM 1400 Fundamental Chemistry I or CHEM 1402 General Chemistry I
- Core Curriculum Course 1 (3 hours)

Second Semester (17 hours)
- RHET 1312 Composition II
- CPSC 1370 Computer Literacy
- BIOL 2402 Botany
- CHEM 1401 Fundamental Chemistry II or CHEM 1403 General Chemistry II
- Core Curriculum Course 1 (3 hours)

Third Semester (17 hours)
- BIOL 2401 Microbiology
- BIOL 3303 Principles of Ecology
- CHEM 2450 Organic Chemistry-Short Course
- Core Curriculum Courses 1 (6 hours)

1. RHET 1311, 1312, BIOL 1401, MATH 1302, and two four-hour chemistry or biology lab courses listed in this curriculum count towards UALR core curriculum requirements. Twenty-seven additional hours of courses must be chosen from the core to fulfill the core curriculum. See "Core Requirements for Bachelor Degrees" on page 27 for a list of all the core curriculum courses.

Fourth Semester (16 hours)
- PHYS 1321 Elementary Physics I
- BIOL 2403 Zoology
- BIOL 3300 Genetics
- Core Curriculum Courses 1 (6 hours)

Fifth Semester (15 hours)
- BIOM 3210 Laboratory Principles and Techniques
- BIOM 3211 Introduction to Research
- PHYS 1322 Elementary Physics II
- Upper-level BIOL Electives

Sixth Semester (17 hours)
- BIOL 4417 Molecular Biology
- BIOL 4418 Biotechnology
- Core Curriculum Courses 1 (3 hours)
- Unrestricted Electives (6 hours)

Seventh Semester (13 hours)
- BIOL Upper Level Electives (4 hours)
- Upper Level Electives (3 hours)
- Core Curriculum Courses 1 (6 hours)

Eighth Semester (13 hours)
- BIOM 4305 Cell Culture Principles and Techniques
- BIOM 4106 Technology Seminar
- BIOM 4507 Biotechnology Laboratory Internship
- BIOL 4190 Biology Seminar
- Upper Level Electives (3 hours)

Courses in Biology (BIOL)

BIOL 1102 Introductory Biology Laboratory
A laboratory course in introductory biology covering the general concepts of microscope use, cell organization, physical and chemical bases of life, energy processing, cell reproduction, plant tissue structures, animal structures, organismic reproduction and development, genetics, and evolution. Offered only to students who have transfer credit for three credit hours of introductory biology lecture or the equivalent. Two hours laboratory per week. One credit hour.

BIOL 1400 Evolutionary and Environmental Biology
Evolutionary, ecological, and environmental interrelationships among organisms. Basic biological principles and modern technology form the basis for inquiry and debate. The impact of society upon global biodiversity is examined from competing viewpoints. The role of science in shaping society and the influence of society upon science are evaluated. Students learn through reading, writing, computer simulations, videos, field exercises, and through participation in critical thinking and problem-solving activities. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 1401 Science of Biology
The process of science, including observation, evaluation, and predictions, will be applied to the understanding of biological principles. Illustration of the methods of science in the study of major biological concepts, including the cell theory, energy transformation, inheritance, and the theory of evolution. Selected biological systems will be surveyed to compare life forms and to examine related human issues. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 1411 Introduction to Human Anatomy and Physiology I
The first semester of a two-semester course emphasizing the anatomy and physiology of the human organism. After an introduction, the following topics will be discussed: basic chemistry, cell biology, histology, integumentary system, skeletal system, nervous system, and sensory system. This course cannot be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 1412 Introduction to Human Anatomy and Physiology II
Prerequisite: BIOL 1411 or consent of instructor. The second semester of a two-semester course emphasizing the anatomy and physiology of the human organism. The muscular, digestive, respiratory, circulatory, lymphatic, urinary, reproductive, and endocrine organ systems will be covered during this term. This course cannot be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory. Four credit hours.

BIOL 1413 Human Biology
A study of the structure and function of the human body, including the basic anatomy and physiology of the various body systems. Special attention will be given to methods of promoting and ensuring the well-being of the human organism. Designed for general students who want practical information about their bodies. This course is not intended for students majoring in nursing nor can it be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 2301 Environment and Man
A study of the relationship between humans and the natural environment. Characteristic animal and plant life in broad areas of nature and the influence individuals exert on these organisms; population and environmental problems humans have created, with the possible implications for the future and corrections which must be faced. Three hours lecture. Credit not applicable toward a biology major. Three credit hours.

BIOL 2400 Human Microbiology
A study of microbiological principles and those microorganisms relating to humans and their environment. This course is designed for associate degree health related programs and is not recommended to meet the requirements for a baccalaureate degree in health related professions. This course can not be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 2401 Microbiology
Prerequisites: BIOL 1400 or 1401, or 1411 and 1412, CHEM 1400 or 1402, or their equivalents. The morphology, physiology, and classification of microorganisms; the relationship of microorganisms to biotechnology, medicine, and nursing. Two hours lecture, four hours laboratory per week. Four credit hours.
BIOL 2402 Botany
Prerequisite: BIOL 1400 or 1401 or equivalent. The structure and function of plants at the molecular, cellular, and organismal levels; survey of major plant groups. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 2403 Zoology
Prerequisite: BIOL 1400 or 1401 or equivalent. A survey of the animal kingdom from microscopic forms to mammals. Acquaints the student with the nature of animals. A study of general principles including taxonomy, organ systems, similarities of structure, function, and behavior of animals. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3100 Genetics Laboratory
Prerequisite or corequisite: BIOL 3300. Selected experiments in genetics to emphasize techniques, analysis, and interpretation of the principles of inheritance in plants and animals. Two hours laboratory per week. One credit hour.

BIOL 3103 Principles of Ecology Lab
Prerequisite or corequisite: BIOL 3303. Basic methods and materials of ecological research. Two hours laboratory. One credit hour.

BIOL 3300 Genetics
Prerequisites: 12 hours of biology to include BIOL 1400 or 1401 or equivalent, four hours of chemistry, and one hour of mathematics. Emphasis on the fundamental topics of modern genetics including the structure and interactions of populations, communities, ecosystems, and the biosphere. Three hours lecture per week. Three credit hours.

BIOL 3391 Cooperative Education in Biology
Prerequisites: BIOL 1400 or 1401, 2402, 2403, or their equivalents. Recommended co-requisite: BIOL 3103. Principles of Ecology Lab. An introduction to living organisms and relationships to their environment including the structure and interactions of populations, communities, ecosystems, and the biosphere. Three hours lecture per week. Three credit hours.

BIOL 3400 Developmental Biology
Prerequisites: BIOL 1400 or 1401, 2403 or their equivalents. The development of organisms including the topics of gametogenesis, fertilization, cleavage, morphogenesis, organogenesis, cell differentiation, and regeneration. These topics will be approached from both the structural point of view of classical embryology and the more recent molecular viewpoint. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3402 Mammalian Anatomy
Prerequisite: BIOL 2403. A study of the gross anatomy of mammalian organ systems with emphasis being placed on the human organism. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3404 Comparative Vertebrate Morphology
Prerequisites: BIOL1400 or 1401, 2403, or their equivalents. The comparative anatomy of selected vertebrate animals; homologous structures in various animal groups. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3405 Invertebrate Zoology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. Comparative anatomy, physiology, embryology, adaptive radiation, and evolutionary relationships of invertebrate groups. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3407 Plant Morphology
Prerequisites: BIOL 1400 or 1401, 2402, or their equivalents. A lecture-laboratory course covering the fundamental morphological characteristics of plants. The life histories and habits of the major plant groups are covered. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3408 Vertebrate Histology
Prerequisites: BIOL 1400 or 1401, 2403, or BIOL 1411 and 1412, or their equivalents. A study of the cell and fundamental tissues; the microscopic structure of the organ systems of representative vertebrates, and emphasis on the relationship between microscopic structure and function. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3409 Vertebrate Zoology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. A general study of vertebrates, including adaptations, reproduction, behavior, distribution, ecology, and taxonomy. Emphasis on Arkansas species and field studies. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3411 Dendrology
Prerequisites: BIOL 1400 or 1401, 2402, or their equivalents. Detailed coverage of tree and other woody plant identification, recognition, classification, silvics, range, economic use, and wildlife value of native and introduced North American species. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3199, 3299, 3399, 3499 Special Topics
Prerequisites: variable, depending on instructor and course content. Each special topics course must first be approved by the biology department, which will also determine if credit will be awarded. The topics will represent specialized areas of study in the biological sciences. Credit will vary and will depend on the amount of time necessary to cover the topic. One to four hours lecture. One, two, three, or four credit hours.

BIOL 4190 Biology Seminar
Prerequisites: senior standing and completion of or concurrent enrollment in biology core courses. Preparation and presentation of papers including analysis and implications of investigations in the biological sciences. Required of all majors. One hour per week. One credit hour.

BIOL 4201 AIDS
Prerequisites: BIOL 1400 or 1401, junior class standing, or consent of the instructor. Graduate standing required if student enrolled in BIOL 5201. A study of the disease AIDS. This will include cell biology, the disease process, and the social, economic, legal, and political aspects related to the disease and society. This course cannot be used for credit toward a biology major or minor. Dual-listed in the UALR Graduate Catalog as BIOL 5201. Two hours lecture per week. Two credit hours.

BIOL 4100, 4200, 4300 Independent Study
Prerequisites: senior standing, at least 20 hours in biology, and consent of the instructor. For students who wish to conduct library studies, curate museum collections, help faculty with a variety of special projects, or perform other activities. The student is expected to spend two to four hours per week on the project for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the project and will be agreed upon in advance by the student and instructor. No more than six hours independent study, cooperative education, and/or undergraduate research may be counted for biology elective credit (see “Independent Research and Study” on page 34). One, two, or three credit hours.

BIOL 4305 Animal Behavior
Prerequisites: BIOL 1400 or 1401, 2403. Graduate standing required to enroll in 5305. Description of the known behavior of various vertebrate and invertebrate phyla with emphasis on adaptive significance. Special attention to mating, defensive, nutritive, and social behavior. The ontogeny of behavioral patterns will be presented where known. Behavior will be related to the ecology of various animal populations. Dual-listed in the UALR Graduate Catalog as BIOL 5305. Three hours lecture per week. Three credit hours.

BIOL 4308 Wildlife Management
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. Wildlife conservation and management. Ecology, population dynamics, and development, and management of wildlife in relation to the objectives of consumptive and nonconsumptive interest groups. Three hours lecture per week. Three credit hours.

BIOL 4309 Wildlife Management Techniques
Prerequisites: BIOL 4100 or 1401, 2403. Techniques and equipment used to obtain biological information needed to manage wildlife on a scientific basis. Fundamental procedures of planning and conducting wildlife investigations. One hour lecture, six hours laboratory per week. Three credit hours.

BIOL 4310 Evolution
Prerequisites: BIOL 1400 or 1401 and junior standing. Graduate standing required if student enrolled in 5310. Basic principles of evolutionary biology are covered, including: Darwinian Theory, principles of inheritance, micro-evolution and speciation processes. The evolution of humans is also discussed. Dual-listed in the UALR Graduate Catalog as BIOL 5310. Three hours lecture per week. Three credit hours.

BIOL 4311 Neurobiology
Prerequisites: 16 hours in biology or consent of instructor; CHEM 1401 or 1403 strongly encouraged. This course examines the functioning of the nervous system, with emphasis on vertebrates—in particular, humans. The course covers the structure and function of neurons as the fundamental unit of the nervous system, functional neuroanatomy, and the basic principles of nervous system development. Three hours lecture per week. Three credit hours.

BIOL 4189, 4289, 4389 Undergraduate Research
Prerequisites: junior standing, at least 20 hours in biology, consent of the instructor. Students will be placed in a work setting consistent with their biological career objectives. Students will be placed in a work setting consistent with their biological career objectives. A paper reporting on the project in journal format is required for completion of the course. The student is expected to spend two to four hours per week on the project for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the project and will be agreed upon in advance by the student and instructor. No more than six hours independent study, cooperative education, and/or undergraduate research may be counted for biology elective credit (see “Independent Research and Study” on page 34). One, two, or three credit hours.

BIOL 4391 Cooperative Education in Biology
Prerequisites: senior standing, acceptance as a biology major, minimum GPA of 2.50, completion of BIOL 3391, and consent of the department chairperson. Cooperative education seeks to integrate academic and professional work experience. Students will be placed in a work setting consistent with their biological career objectives. This course requires a minimum of 200 semester work hours. No more than six hours independent study, cooperative education, and/or undergraduate research may be counted for biology elective credit (see “Independent Research and Study” on page 34). Three credit hours.
BIOL 4401 Cell Biology
Prerequisites: BIOL 1400 or 1401, 12 additional hours in biology, CHEM 1401 or 1403; microbiology is strongly encouraged. A study of the organization of cells as related to the structure and function of biological molecules. Emphasis is placed on eukaryotic cells. Dual-listed in the UALR Graduate Catalog as BIOL 5401. Three hours lecture, three hours laboratory per week. Four credit hours.

BIOL 4402 Limnology
Prerequisites: BIOL 1400 or 1401, 2402, 2403, 3503, CHEM 1403, or equivalents. A study of physical and chemical characteristics of water, morphology and physiography of lake and stream basins and an introduction to the ecology and taxonomy of aquatic communities. Laboratory: Instruction in methods of physical, chemical, and biological sampling and analysis. Field work will include study of two to four types of aquatic habitats. Some extended Saturday field trips will be required. Dual-listed in the UALR Graduate Catalog as BIOL 5402. Two lectures, one four-hour laboratory per week. Four credit hours.

BIOL 4403 Comparative Physiology
Prerequisites: BIOL 1400 or 1401, 2403, CHEM 1403, or the equivalents. 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. Dual-listed in the UALR Graduate Catalog as BIOL 5403. Three hours lecture, three hours laboratory per week. Four credit hours.

BIOL 4404 Mammalogy
Prerequisites: BIOL 1400 or 1401, 2403, 3404 or 3409, or their equivalents, or consent of instructor. Classification, distribution, ecology, and natural history of mammals. Emphasis on Arkansas species. Field studies, preparation of study specimens. Dual-listed in the UALR Graduate Catalog as BIOL 5404. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4405 Ichthyology
Prerequisites: BIOL 1400 or 1401, 3404 or 3409. Classification, phyley, morphlogy, physiology, and ecology of fishes concentrating on North American and Arkansas freshwater fishes. Dual-listed in the UALR Graduate Catalog as BIOL 5405. Three hours lecture, three hours laboratory. Four credit hours.

BIOL 4406 Pathogenic Microbiology
Prerequisites: BIOL 1400 or 1401, 2401, or their equivalents. Survey of pathogenic microbiology, immunology, and virology with emphasis on fundamental principals of each science and their application to the diagnosis and control of human diseases. Dual-listed in the UALR Graduate Catalog as BIOL 5406. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 4407 Herpetology
Prerequisites: BIOL 1400 or 1401, 3403, 3404 or 3409, or their equivalents, or consent of instructor. Classification, anatomy, distribution, ecology, and natural history of amphibians and reptiles. Field techniques, student projects, laboratory work, and curatorial training will emphasize species found in Arkansas. Dual-listed in the UALR Graduate Catalog as BIOL 5407. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4408 Advanced Field Biology
Prerequisites: BIOL 1400 or 1401, 2402, 2403, 3303, 3409, or their equivalents. An analysis of major ecological habitats. Comparison of these areas with respect to their physiographic floral and faunal components. Emphasis on vertebrates. Students will spend an extended time in the field. Enrollment is by application only, and a separate fee is charged. Ninety hours of lecture/laboratory/field/trip activity. Four credit hours.

BIOL 4409 Plant Taxonomy
Prerequisites: BIOL 1400 or 1401, 2402 or their equivalents. A study of the principles of plant identification, classification, systematics, and nomenclature. Major families of flowering plants with emphasis on the floristics of the immediate area. Dual-listed in the UALR Graduate Catalog as BIOL 5409. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4410 Fisheries
Prerequisites: BIOL 1400 or 1401, 2403, 3303 or 3409, or their equivalents, or consent of instructor. A survey of fish management and fish culture principles and techniques including population assessment, habitat improvement, pond culture, commercial fish farming, and an introduction to fish diseases. Dual-listed in the UALR Graduate Catalog as BIOL 5410. Three hours lecture, three hours laboratory per week. Four credit hours.

BIOL 4411 Ornithology
Prerequisites: 16 hours in biology to include BIOL 2403. 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. Three hours lecture, two hours laboratory per week. Weekend field trips. Dual-listed in the UALR Graduate Catalog as BIOL 5411. Four credit hours.

BIOL 4412 Plant Ecology
Prerequisites: BIOL 1400 or 1401, 2402 or 2403, 3303, or their equivalents. 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. Dual-listed in the UALR Graduate Catalog as BIOL 5412. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 4413 Immunology
Prerequisites: BIOL 1400 or 1401, 2401, CHEM 1402, 1403. Immunobiology and immunoochemistry of humoral and cellular mechanisms of immunity. Dual-listed in the UALR Graduate Catalog as BIOL 5413. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 4414 Biological Methods and Instrumentation
Prerequisites: Junior standing (60 hours to include 20 hours of biology including 2401, 3300), eight hours of chemistry. A hands-on study of modern biological experimentation. Designed to allow students to perform experiments using radioisotopes, electrophoresis, centrifugation, chromatography, RIA, ELISA, respirometry, enzyme assays and spectrophotometric analysis, with an emphasis on computer analysis of data. Each student will complete an individual research project. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4415 Biometry
Prerequisites: 12 hours of biology, environmental health science, or earth science (in combination or singularly); MATH 1302 or higher numbered mathematics course; three hours of statistics; or consent of instructor. Graduate standing required if student enrolled in 5415. A computer based course in experimental design, data analysis, and interpretation. The objective of the course is to teach the application of statistical procedures relevant to the academic emphasis of students, not statistics per se. Designed to be especially beneficial to those students planning to seek an advanced degree upon completion of their baccalaureate or to go into quality control or research positions. Dual-listed in the UALR Graduate Catalog as BIOL 5415. Two hours lecture and four hours laboratory. Four credit hours.

BIOL 4416 Microscopy
Prerequisites: 15 hours of biology. Graduate standing if student enrolled in 5416. A laboratory course 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, polarized light, differential interference, contrast, polarized and epi fluorescent light microscopy, and scanning and transmission electron microscopy. Strong emphasis is placed on experimental design and use of the microscope as an experimental tool. Dual-listed in the UALR Graduate Catalog as BIOL 5416. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4417 Molecular Biology
Prerequisites: 19 hours in biology including both BIOL 2401 and 3300; CHEM 1401 or 1403. Successful completion of either BIOL 3400 or 4401 is strongly encouraged. If taken for graduate credit, the prerequisites also include a BS in biology or permission of the instructor. 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. Dual-listed in the UALR Graduate Catalog as BIOL 5417. Two hours of lecture and four hours of laboratory per week. Four credit hours.

BIOL 4418 Biotechnology
Prerequisites: 19 hours of biology including 2401 and 3300; CHEM 1401 or 1403. BIOL 3400 and 4401 are strongly recommended. BIOL 4417 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, agri/industrial, and agricultural applications. Graduate students must complete and defend a term paper. Dual-listed in the UALR Graduate Catalog as BIOL 5418. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4419 Plant Physiology
Prerequisites: BIOL 1400 or 1401, 2402, CHEM 2450, or their equivalents, or consent of instructor. Study of water relations, nutrition, and metabolism including photosynthesis, growth, and development. Dual-listed in the UALR Graduate Catalog as BIOL 5419. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4420 General Biochemistry
See CHEM 4420.

BIOL 4421 Introduction to Geographic Information Systems (GIS)
Prerequisites: ERSC 2320 or ENHS 3415 or BIOL 4309, or consent of instructor. This course introduces Geographic Information Systems (GIS) and the use of spatial data for problem-solving in science. The lecture portion of the course focuses on the data models used to represent spatial features and on the processes involved in creating, acquiring, analyzing, and displaying georeferenced information. The laboratory portion of the course employs a project-based methodology including applications from geography, biology, environmental science, and political science to foster basic GIS software proficiency. Dual-listed in the UALR Graduate Catalog as BIOL 5421. Two hours lecture per week, four laboratory hours. Four credit hours.

BIOL 4422 Mammalian Physiology
Prerequisites: BIOL 1400 or 1401, 2403, Chemistry 1403, or their equivalents. General physiological principles and a treatment of functions and interrelations of mammalian systems. Dual-listed in the UALR Graduate Catalog as BIOL 5422. Three hours lecture, two hours laboratory. Four credit hours.
BIOL 4423 Plant Anatomy
Prerequisites: BIOL 1400 or 1401, 2402, or their equivalents. Detailed coverage of the microscopic anatomy of all the organs of seed plants and a critical evaluation of the major tissue types found within these plant organs. Dual-listed in the UALR Graduate Catalog as BIOL 5423. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4424 Entomology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. A study of insects including their anatomy, physiology, behavior, development, diversity, classification, and economic importance. Dual-listed in the UALR Graduate Catalog as BIOL 5424. Two hours lecture, four hours laboratory. Four credit hours.

Gulf Coast Research Laboratory Courses (BIOL)

BIOL 3450 Introduction to Marine Zoology
Prerequisite: eight hours of biological science. A general introduction to the marine environment with emphasis on local fauna. Introduction to the marine environment and its physical, chemical, geological, and ecological characteristics that affect marine life. Emphasis on local fauna and estuarine species. Four credit hours.

BIOL 3550 Oceanography II: Marine Biology
Prerequisite: eight credit hours of biological science. An overview of biological oceanography with emphasis on organisms, habitats, and fisheries of the Mississippi Sound and the Gulf of Mexico. Five credit hours.

BIOL 4151, 4251, 4351 Special Problems in Marine Science
Prerequisites: to be set by problem director. Special problems are research oriented, and grades are based on reports submitted by students. Students who want to enroll in special problems course must submit a brief preliminary study to the GCRL registrar. Special problems proposal forms are available from the GCRL registrar. This proposal must be approved by the student’s UALR advisor and the GCRL staff member directing the study. One, two, or three credit hours.

BIOL 4352 Coastal Vegetation
Prerequisite: 10 hours of biology including general botany. A broad study of the general and specific aspects of coastal vegetation, with emphasis on local examples such as tidal marshes, swamps, savannahs, woodlands, strand and island vegetation, and certain unique and peculiar areas. Vegetational composition, variation, succession, climax, and distribution, including survey and descriptive methods. Aerial techniques, ground truth, plant identification, delineation of vegetational types, and mapping. Three credit hours.

BIOL 4450 Marine Botany
Prerequisite: 10 credit hours of biology, including botany. A survey, based on local examples, of the principal groups of marine algae and marine flowering plants, treating structure, reproduction, distribution, identification, and ecology. Four credit hours.

BIOL 4451 Comparative Histology of Marine Organisms
Prerequisites: general histology, consent of instructor. A detailed study of the histological organization of representative marine organisms. Fixation, processing, and study of tissues using light microscopy, transmission electron microscopy, and scanning electron microscopy. The relationship between structural changes and physiological changes during life cycle of organism. Histopathology with respect to tissue responses to infection and damage by toxic agents. Four credit hours.

BIOL 4452 Marine Fisheries Management
Prerequisite: 16 hours of biological science or consent of instructor. Practical marine fishery management problems. Trends in human population numbers, aggregate harvest, and life styles with associated environmental impacts and resource allocation implications, which pose complex problems for fishery management. Scientists and administrators. International and local legal, political, social, and economic factors, as well as biological potential, must be considered in making rational decisions toward achieving optimum yield from marine fishery resources. The history of management scheme successes and failures, sources of information, and the current status of fishing technology, mariculture, management methods, legal problems, and educational needs will be explored. Four credit hours.

BIOL 4453 Behavior and Neurobiology of Marine Animals
Prerequisite: 16 credit hours of zoology or consent of instructor. Survey of behavior, neuroanatomy, and neurophysiology of marine animals with emphasis on the neural mechanisms underlying the behavior of selected invertebrates, fishes, birds, and mammals. Introduction to the experimental study of the behavior of marine animals in the field and laboratory. When possible, students will carry out independent studies on local species. Neural mechanisms underlying behavior; the anatomy and physiology of the nervous systems of marine invertebrates and vertebrates. Four credit hours.

BIOL 4199-4499 Special Topics in Biology
Prerequisites: 20 hours in biology, consent of instructor; other prerequisites may be required depending on the topic. Specialized study in the biological sciences. Credit varies and depends on the depth of the course content. Each topic is appropriate for both advanced undergraduate and graduate students. Dual-listed in the UALR Graduate Catalog at the 5000-level. One to four hours lecture per week combined with up to four hours laboratory. One, two, three, or four credit hours.

BIOL 4454 Fauna and Faunistic Ecology of Tidal Marshes
Prerequisite: 16 credit hours of biological science or consent of instructor. Survey and discussion of the taxonomy, distribution, trophic relationships, reproductive strategies, and adaptation of tidal marsh animals with emphasis on those occurring in northern Gulf marshes. Four credit hours.

BIOL 4455 Early Life History of Marine Fishes
Prerequisites: ichthyology, fisheries, biology, ecology, or consent of instructor. Reproductive strategies and early developmental processes of marine fishes. Includes discussion of temporal and spatial distribution patterns, population dynamics, and ecological interactions of fish eggs and larvae; role of early stages of fishes in fisheries oceanography, marine ecology, and systematics; methods of sampling and identifying fish eggs and larvae; data quantification and analysis; rearing experiments; techniques for studying larval fish dynamics. Four credit hours.

BIOL 4456 Salt Marsh Plant Ecology
Prerequisites: general botany, plant taxonomy, plant physiology, general ecology, or consent of instructor. Botanical aspects of local marshes. Plant identification, composition, structure, distribution, and development of coastal marshes. Biological and physical interrelationships. Primary productivity and relation of marshes to estuaries and associated fauna. Four credit hours.

BIOL 4550 Marine Microbiology
Prerequisites: general microbiology, consent of instructor. Introduction to marine microbiorganisms and pertinent literature sources. The role of microorganisms in the ecology of oceans and estuaries is stressed. Use of laboratory sampling equipment, methods of processing samples, and laboratory techniques useful in studying marine microorganisms. Five credit hours.

BIOL 4551 Marine Ecology
Prerequisite: 16 credit hours of biological science including general zoology, general botany, and invertebrate zoology. A consideration of the relationship of marine organisms to their environment. The effects of temperature, salinity, light, nutrient concentration, currents, food, predation, and competition on the abundance and distribution of marine organisms are considered. Five credit hours.

BIOL 4650 Marine Invertebrate Zoology
Prerequisites: 16 credit hours of zoology, including an introductory course in invertebrate zoology. A concentrated study of the important free-living marine and estuarine invertebrates of the Mississippi Sound and adjacent continental shelf of the northeastern Gulf of Mexico, with emphasis on the structure, classification, phylogenetic relationships, larval development, and functional processes. Six credit hours.

BIOL 4651 Marine Vertebrate Zoology and Ichthyology
Prerequisites: 16 credit hours of zoology including comparative morphology or consent of instructor. A general study of the marine chordata, with emphasis on fish including lower groups, mammals, and birds. Groups of vertebrates occurring in the area associated with marine environments, with taxonomic characteristics used in their classification and identification, and with functional adaptations of the organisms. Greatest emphasis is placed on local fishes. For obvious reasons, no conscious attempt is made to duplicate material which could be offered with ease to the student at his or her home institution. Every effort is made to take advantage of the unique teaching situation that the area provides. Six credit hours.

BIOL 4652 Parasites of Marine Animals
Prerequisites: general parasitology or consent of instructor. A study of the parasites of marine and estuarine animals with emphasis on morphology, taxonomy, life histories, and host-parasite relationships. Six credit hours.

BIOL 4653 Aquaculture
Prerequisites: 16 credit hours of biology, including invertebrate zoology, natural history of vertebrates, or ichthyology. A review of the technology, principles, and problems relating to the science of aquaculture, with emphasis on the culture of marine species. Six credit hours.

UAMS Molecular Biotechnology Courses (BIOM)

BIOM 3210 Laboratory Principles and Techniques
Prerequisite: admission to the professional program in medical technology or molecular biotechnology. Introduction to principles and techniques used in clinical and research laboratories. Emphasis on laboratory mathematics, safe practices, and basic instrumentation. Two hours lecture per week.

160 Department of Biology
BIOM 3211 Introduction to Research
Prerequisite: admission to the professional program in medical technology or molecular biotechnology. How to design, conduct, and interpret life science research including planning biomedical research, the principles of statistical design, sample size estimation, and designs in life science research. Also includes the correspondence between objectives, design and analysis. Two lecture hours per week.

BIOM 4106 Technology Transfer
Prerequisites: admission to the professional program in molecular biotechnology and UALR BIOL 4417 and BIOL 4418. Overview of the conversion from research to manufacturing, including regulatory environment in which the production occurs. One lecture hour.

BIOM 4305 Cell Culture Principles and Techniques
Prerequisites: admission to the professional program in molecular biotechnology and UALR BIOL 4417 and BIOL 4418. Introduction to principles and techniques of cell culture. Explores protocols for the culture, cloning, and selection of cells. Includes basic cell biology, growth characteristics and requirements, cell passing, and quantitation. Two lecture hours, three hours laboratory per week.

BIOM 4507 Biotechnology Laboratory Internship
Prerequisites: admission to the professional program in molecular biotechnology and UALR BIOL 4417 and 4418. Supervised experience in a biotechnology research laboratory. Emphasis on manual and automated techniques and development of professional behavior. Includes research principles and techniques, laboratory organization, and materials management. Twenty clinic hours per week.
ENVIRONMENTAL HEALTH SCIENCES

A Student Professor Carl L. Stapleton, Director

Environmental health sciences professionals occupy a critical role in preventing injuries, illnesses, and deaths attributed to environmental factors. This program provides interdisciplinary skills necessary to assess physical, biological, and chemical characteristics in our environment and their relationship to human health.

UALR offers a program of study leading to a bachelor of science degree in environmental health sciences. A core curriculum includes courses in environmental epidemiology, introduction to environmental health sciences, environmental health sciences seminar, environmental regulations, environmental planning, biological sciences, chemistry, physics, statistics, and an introduction to computer programming.

Four areas of concentrated study are offered in the program: environmental/public health sciences, environmental quality management, occupational safety and health, and environmental planning. Internships and cooperative education experiences in environmental health sciences are available and strongly recommended for all majors. Both public and private organizations provide these opportunities. A minor in environmental health sciences is also available.

Admission Requirements

To major in environmental health sciences a student must have completed a minimum of 15 credit hours with a cumulative grade point average of 2.00 or greater and must have completed ENHS 2320 Introduction to Environmental Health Sciences with a grade of C or greater. Students who entered UALR conditionally by contract must complete the contract before being eligible for admission to the environmental health sciences program. Decisions regarding course equivalency and situations in which students have tested out of courses or transferred credit from other programs will be made by the program director.

Minor in Environmental Health Sciences

A minor in environmental health sciences requires 18 credit hours, including ENHS 2320 Introduction to Environmental Health Sciences and 3310 Environmental Regulations. The remaining 12 hours are to be selected from the following courses: ENHS 4410 Environmental Planning, 3430 Environmental Epidemiology, 3340 Introduction to Water Resources Management, 3350 Principles of Air Pollution, 4320 Introduction to Industrial Hygiene, and 3415 Environmental Impact Analysis.

Major in Environmental Health Sciences

The major in environmental health sciences requires 36 credit hours including 15 hours of a core curriculum and 21 hours in one of four concentration options. It is strongly recommended that each major complete an internship (ENHS 4295, 4395, 4495, 4595, or 4695).

Bachelor of Science in Environmental Health Sciences

Core Curriculum (44 hours)

Contact your advisor for course options to satisfy the laboratory science core curriculum.

Environmental Health Sciences (15 hours)

ENHS 2320 Introduction to Environmental Health Sciences
ENHS 3310 Environmental Regulations
ENHS 4430 Environmental Epidemiology
ENHS 4190 Seminar in Environmental Health Sciences
ENHS 4410 Environmental Planning

Related Professional Development (25 hours)

BIOL 1401 Science of Biology
BIOL 2401 Microbiology
CHEM 1402 General Chemistry I
CHEM 1403 General Chemistry II
STAT 2350 Introduction to Statistical Methods
PHYS 1321 Elementary Physics I
CPSC 1370 Computer Literacy

Options (pick one set of 21 hours):

Environmental/Public Health Science (21 hours)

CHEM 2450 Organic Chemistry-Short Course
ENHS 3415 Environmental Impact Analysis
ENHS 3340 Introduction to Water Resources Management
HSCI 3374 Community Health Agencies
BIOL 3406 Entomology
HIST 4305 Environmental History

Occupational Safety and Health (21 hours)

CHEM 3350 General Organic Chemistry I and CHEM 3150 Organic Chemistry Laboratory I
ENHS 4320 Introduction to Industrial Hygiene
ENHS 3350 Principles of Air Pollution
SYEN 3318 Decision and Risk Analysis
BIOL 4422 Mammalian Physiology
BIOL 4406 Pathogenic Microbiology

Environmental Quality Management (21 hours)

CHEM 3350 General Organic Chemistry I and CHEM 3150 Organic Chemistry Laboratory I
ENHS 3350 Principles of Air Pollution
ENHS 3340 Introduction to Water Resources Management
ENHS 3341 Principles of Air Pollution
ERSC 3372 Surficial Hydrology
BIOL 4402 Limnology

Environmental Planning (21 hours)

CHEM 2450 Organic Chemistry-Short Course
ENHS 3340 Introduction to Water Resources Management
ENHS 3341 Environmental Impact Analysis
ENHS elective (3 hours)
ERSC 4322 Environmental Geology
BIOL 3303 Principles of Ecology and BIOL 3103 Principles of Ecology Lab

Electives

Students should select remaining hours from elective courses that augment concentration areas, and complete a required minor; students should consider an internship. The program director will recommend electives for specific concentrations.

Courses in Environmental Health Sciences (ENHS)

ENHS 2320 Introduction to Environmental Health Sciences
Basic elements of environmental health sciences. Environmental health effects, water supplies, water pollution control, solid waste management (hazardous wastes), air pollution control, general environmental regulations. Lectures will be supplemented with class discussions and field studies. Three hours lecture per week. Three credit hours.

ENHS 3340 Introduction to Water Resources Management
Prerequisites: ENHS 2320, CHEM 1405, BIOL 2401, MATH 1302, or the equivalents. Concepts related to the management of surface and ground water resources; sources of environmental pollutants, sampling methods and pollution control alternatives; the application of computers to water resource management problems. Three hours lecture per week. Three credit hours.

ENHS 3310 Environmental Regulations
Prerequisite: ENHS 2320 or equivalent. The basis for regulation of environmental pollutant sources and natural resources. The environmental litigation process is reviewed with reference to appropriate federal, state, and local regulations. Case studies will be used to supplement class lectures. Three hours lecture per week. Three credit hours.

162 Environmental Health Sciences
ENHS 3350 Principles of Air Pollution
Prerequisites: ENHS 2320, CHEM 1403, MATH 1302, or the equivalents. The principles of air quality monitoring, air pollution transport and control methods; effects of air pollutants on health and natural resources; dispersion modeling techniques. Three hours lecture per week. Three credit hours.

ENHS 3391 Cooperative Education in Environmental Health Sciences
Prerequisites: junior standing, acceptance as an environmental health sciences major, minimum GPA of 2.50, and consent of program director. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their environmental education career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

ENHS 4189, 4289, 4389 Research in Environmental Health Sciences
Prerequisites: senior standing, consent of instructor. For students who want to carry out individual research. The student is expected to spend two to four hours per week on the project 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. One, two, or three credit hours.

ENHS 4190 Seminar in Environmental Health Sciences
Prerequisites or corequisites: ENHS 2320, 3415, senior standing, consent of instructor. Discussions of current and emerging environmental health sciences problems. One hour of discussion per week. One credit hour.

ENHS 4320 Introduction to Industrial Hygiene
Prerequisites: ENHS 3310, CHEM 2401 or 3350 and 3150, MATH 1302, or the equivalents. Recognition, evaluation, and control methods for environmental hazards in the workplace; instrumentation techniques for personal and ambient sampling. Regulations appropriate to industrial hygiene are reviewed for various work settings. Three hours lecture per week. Three credit hours.

ENHS 4391 Cooperative Education in Environmental Health Sciences
Prerequisites: junior standing, major in environmental health sciences, minimum GPA of 2.50, minimum of one semester of ENHS 3991, and consent of program director. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their environmental education career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

ENHS 4199-4399 Special Topics in Environmental Health Sciences
Prerequisite: senior standing as environmental health sciences major or consent of instructor. Topics include specialized areas of environmental health sciences. Credit will vary and will be appropriate for both advanced undergraduate and graduate students. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, or three hours lecture per week. One, two, or three credit hours.

ENHS 4410 Environmental Planning
Prerequisite: ENHS 3310 or the equivalent. Environmental planning process and evaluation methods applicable to environmental programs; resource allocation and procurement; emphasis on environmental planning case studies including watershed planning, land use, solid and hazardous waste, air quality, wastewater treatment facilities planning, wetlands, and master planning. Group discussions and role-playing exercises will supplement class lectures. Three hours lecture, two hours laboratory per week. Four credit hours.

ENHS 4415 Environmental Impact Analysis
Prerequisites: ENHS 3340 or 3350, RHET 3316, BIOL 3301 and 3103, STAT 4350, or consent of instructor. Knowledge and skills necessary to prepare and review environmental impact assessments and statements. The content of the National Environmental Policy Act is presented and analyzed. Case studies and group discussions are used to supplement class lectures. Field studies are performed on a selected site for which an environmental impact assessment will be written. Three hours lecture, two hours laboratory per week. Four credit hours.

ENHS 4430 Environmental Epidemiology
Prerequisites: ENHS 3340 or 3350, BIOL 2401, STAT 4350, or consent of instructor. The principles of environmental epidemiology are introduced with emphasis on application to various environmental settings. A brief introduction to vital statistics is provided. Health effects of various environmental agents will be identified with appropriate indicators and epidemiological methods for environmental health sciences professionals to monitor environmental effects. Dual-listed in the UALR Graduate Catalog as ENHS 5430. Three hours lecture, two hours laboratory per week. Four credit hours.

ENHS 4295-4695 Internship in Environmental Health Sciences
Prerequisites: senior standing, consent of instructor. Supervised internship with state, local, and federal agencies and industries concerned with environmental programs. Forty clock hours per hour of credit. Two, three, four, five, or six credit hours.
DEPARTMENT OF CHEMISTRY

SCLB 451
569-3152
569-8838 (fax)
Chairperson:
Gaffney, Jeffrey,
professor
Donaghey University
Professor:
Good, Mary L.
Professors:
Darsey, Jerry A.
Shaikh, Ali Uddin
Swindell, Robert T.
Viswanathan, Tito
Associate Professor:
Steinmeier, Robert C.,
Zhao, Wei
Assistant Professor:
Belford, Robert E.
Luba, James P.
Instructors:
Douglas, Marian S.
Reach, Darryl K.
Research Assistant:
Coop, Leslie B.

The department is organized with the following objectives in view: to increase the general cultural background of all students; to prepare chemistry majors for graduate study, industrial work, or positions with professional ratings in government service; to provide the basic training for professional students in medicine, dentistry, engineering, pharmacy, and other professional fields; and to prepare high school chemistry teachers.

The department’s bachelor of science degree is certified by the American Chemical Society (ACS). Students earning this degree will be certified to the ACS for full membership on graduation.

The department sponsors a student affiliate chapter of the ACS. Any student enrolled in a program of study leading to a bachelor’s degree in chemistry or a related discipline is eligible for membership. The chapter serves as a focal point for those interested in the field of chemistry and offers them opportunities for practical experience and professional contacts.

Admission Requirements

Admission requirements for the bachelor of arts (BA) or bachelor of science (BS) program of study in chemistry follow. The student must have: (1) a cumulative grade point average of 2.00 or greater, (2) received a C or greater grade in Mathematics 0301 Intermediate Algebra or in an equivalent or more advanced course, (3) received a grade of B or greater in Chemistry 1400 and 1401 or their equivalents, or a grade of C or greater in Chemistry 1402, the equivalent, or more advanced courses.

Honors Program in Chemistry

The department also offers an honors program in chemistry. To graduate with honors a student must (1) maintain an overall grade point average of 3.20 or greater, (2) maintain a grade point average of 3.20 or greater in chemistry courses, (3) complete at least four credit hours of a faculty-directed laboratory research project and present the findings in a scientific meeting or departmental seminar, and (4) meet ACS certification requirements.

Major in Chemistry

The BS in chemistry requires at least 34 hours in chemistry above the freshman level including: CHEM 2310, 2311, 3150, 3170, 3171, 3250, 3340, 3350, 3351, 3370, 3371, 4190, 4340, and 4411. Required courses outside of the chemistry department are PHYS 2321, 2121, 2322, 2122, and MATH 1451, 1452, 2453. Additional requirements for ACS certification are: six credit hours of advanced chemistry courses to include CHEM 4420 Biochemistry, two hours of undergraduate research, and a three-hour upper-level mathematics course. A second language or a computer language is encouraged but not required. A minor is not required for this curriculum.

The BA in chemistry is offered for premedical and predental students, secondary teachers, and others. Requirements for this degree include 26 hours above the freshman level including CHEM 2310, 2311, 3150, 3151, 3340, 3350, 3351, 3572, 4190, and three hours of upper-level chemistry electives. Required courses in Physics are PHYS 1321, 1121, 1322, 1122. MATH 1302 and 1303 are the only required mathematics courses, but one or two semesters of calculus are strongly recommended. A minor in biology is recommended for this program.

Secondary Teacher Licensure in Science Education

This concentration is designed to prepare students for certification in secondary education. Chemistry is the major emphasis and this program meets the requirements for a BA in chemistry. Earth science is the secondary emphasis as prescribed by Arkansas law. A minor in secondary education is required. For additional information review “Secondary Teacher Licensure” on page 45.

Minor in Chemistry

A minor in chemistry requires a minimum of 22 hours, to include CHEM 1402, 1403, 2310, 2311, 3350, 3150, 3351, and 3151 or equivalent courses.

Transfer Students

Transfer students must meet all degree requirements. In addition, transfer students must successfully complete at UALR a minimum of six hours of upper-level chemistry courses for a major in chemistry or three hours of upper-level chemistry courses for a minor in chemistry.

Options in Freshman Chemistry

- Students who have had two units of high school algebra and high school chemistry and demonstrate proficiency on the chemistry diagnostic test given on the first day of class in CHEM 1402 should take CHEM 1402 and 1403.
- Students who have had no high school chemistry and have a weak high school mathematics background but are interested in a preprofessional or science degree should take CHEM 1300, 1402, and 1403.
- Students whose major field requires only eight hours of freshman chemistry should take CHEM 1400 and 1401. This sequence will prepare a student to take CHEM 2450 Organic Chemistry-Short Course, but not other upper-level chemistry courses.

Graduate Programs

The department also offers the master of arts and the master of science degrees in chemistry and cooperates with the Department of Applied Science in offering the applied science PhD in applied chemistry. Consult the UALR Graduate Catalog for a description of these programs, as well as policies governing UALR graduate programs.

Academically talented undergraduate chemistry students may schedule courses on an accelerated basis and enroll in selected graduate courses in their senior year. Students may receive a master’s degree one year after completing the BS degree. This program is an option only for students who have excellent academic records for the first three years of undergraduate study and have completed the suggested 108 hours of undergraduate work through the junior year. Permission for early enrollment in graduate courses in the senior year must be obtained from the dean of the Graduate School on recommendation of the department chairperson. Students registered for graduate credit in dual-listed (4000/5000) courses are responsible for additional assigned work. Details of the bachelor’s/master’s program, including a suggested five-year sequence, are available from the chemistry department office.
### BS Degree, ACS Certification Recommended Sequence

**Freshman Year (32 hours)**

- CHEM 1402 General Chemistry I
- CHEM 1403 General Chemistry II
- MATH 1451 Calculus I
- MATH 1452 Calculus II
- HIST 1311 History of Civilization I
- HIST 1312 History of Civilization II
- RHET 1311 Composition I
- RHET 1312 Composition II
- BIOL 1401 Science of Biology

**Sophomore Year (33 hours)**

- CHEM 2310 Analytical Chemistry I
- CHEM 2311 Analytical Chemistry II
- CHEM 3350 General Organic Chemistry I
- CHEM 3351 General Organic Chemistry II
- CHEM 3150 Organic Chemistry Laboratory I
- CHEM 3250 Qualitative Organic Analysis Laboratory
- MATH 2453 Calculus III
- SPCH 1300 Speech Communication
- PHYS 2321 Physics for Scientists and Engineers I
- PHYS 2322 Physics for Scientists and Engineers II
- PHYS 2121 Physics for Scientists and Engineers I Laboratory
- PHYS 2122 Physics for Scientists and Engineers II Laboratory
- MATH elective (3 hours)

**Junior Year (29 hours)**

- CHEM 3370 Physical Chemistry: Thermodynamics and Kinetics
- CHEM 3371 Physical Chemistry: Quantum and Statistical Mechanics
- CHEM 3170 Physical Chemistry Laboratory I
- CHEM 3171 Physical Chemistry Laboratory II
- CHEM 3340 Introduction to Inorganic Chemistry
- Upper-level (3000-4000) elective (6 hours)
- ARHA 2200 Introduction to Visual Art
- MUHL 2200 Introduction to Music
- DRTN 2200 Introduction to Theatre and Dance
- HIST 2311 U.S. History to 1877
- or HIST 2312 U.S. History since 1877
- or POLS 1310 American National Government
- ENGL 2337 World Literature
- or ENGL 2338 World Literature Themes
- or PHIL 2320 Ethics and Society

**Senior Year (30 hours)**

- CHEM 4340 Inorganic Chemistry
- Social sciences core courses (6 hours)
- Upper-level electives (10 hours)
- CHEM 4411 Instrumental Analysis
- CHEM 4190 Chemistry Seminar
- CHEM 4420 Biochemistry
- CHEM 4289, 4389, 4489 Undergraduate Research

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1. Students lacking the prerequisite for CHEM 1402 should begin CHEM 1300 as suggested in the options in freshman chemistry.
2. To be selected from PHYS 4300, MATH 3312 or 3322.
3. Chemistry electives could include choices among additional undergraduate research, CHEM 3330 History of Chemistry, CHEM 4251 Organic Preparations, CHEM 4350 Intermediate Organic Chemistry, CHEM 4380 Polymer Chemistry, as well as graduate courses (subject to credit hour and grade point requirements).

### BA Degree, Chemistry Major Recommended Sequence

**Freshman Year (31 hours)**

- CHEM 1402 General Chemistry I
- CHEM 1403 General Chemistry II
- BIOL 1401 Science of Biology
- BIOL 2401 Microbiology, BIOL 2402 Botany, or BIOL 2403 Zoology
- MATH 1302 College Algebra
- MATH 1303 Trigonometry
- RHET 1311 Composition I
- RHET 1312 Composition II
- SPCH 1300 Speech Communication

**Sophomore Year (31 hours)**

- CHEM 2310 Analytical Chemistry I
- CHEM 2311 Analytical Chemistry II
- CHEM 3350 General Organic Chemistry I
- CHEM 3351 General Organic Chemistry II
- CHEM 3150 Organic Chemistry Laboratory I
- CHEM 3250 Qualitative Organic Analysis Laboratory
- MATH 2453 Calculus III
- PHYS 1321 Elementary Physics I
- PHYS 1322 Elementary Physics II
- PHYS 1121 Elementary Physics I Laboratory
- PHYS 1122 Elementary Physics II Laboratory
- Second Language (3 hours)

**Junior Year (32 hours)**

- CHEM 3572 Physical Chemistry for the Life Sciences
- Upper-level electives (6 hours)
- HIST 2311 U.S. History to 1877, HIST 2312 U.S. History since 1877
- or POLS 1310 American National Government
- ARHA 2200 Introduction to Visual Art
- MUHL 2200 Introduction to Music
- DRTN 2200 Introduction to Theatre and Dance
- ENGL 2337 World Literature
- or ENGL 2338 World Literature Themes
- or PHIL 2320 Ethics and Society
- CHEM 3340 Introduction to Inorganic Chemistry
- Second Language (6 hours)

**Senior Year (30 hours)**

- CHEM 4190 Chemistry Seminar
- Social sciences core courses (6 hours)
- Upper-level Chemistry Elective (3 hours)
- Upper-level electives (20 hours)

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4. Students lacking the prerequisite for CHEM 1402 should begin CHEM 1300 as suggested in the options in freshman chemistry.
Courses in Chemistry (CHEM)

CHEM 1100 Introductory Chemistry Laboratory
A laboratory course in which experiments are performed to demonstrate principles covered in an introductory course, such as CHEM 1400, 1402, or 1409. It is offered only to students with transfer credit for three hours of introductory chemistry lecture. This course may be taken only one time for credit. Laboratory three hours per week. One credit hour.

CHEM 1300 Preparation for General Chemistry
Prerequisite or concurrent enrollment in the two years of high school algebra, MATH 0301, or equivalent. This course cannot be combined with CHEM 1100 to satisfy four hours of the lab science requirement in the University core curriculum. Introduction to basic chemical concepts plus a review of the applied mathematics pertinent to freshman chemistry. Lecture three hours per week. Three credit hours.

CHEM 1400 Fundamental Chemistry I
Prerequisite: MATH 0301 or equivalent. Basic principles, theory, and laboratory practices in chemistry. Designed especially for students who need no more than three credit hours of college chemistry (students with potential hygienic, physical therapy, respiratory therapy, etc.). With CHEM 1401, it serves as the prerequisite to CHEM 2450 Organic Chemistry-Short Course, but no other upper-level chemistry course. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1401 Fundamental Chemistry II
Prerequisite: CHEM1400 or equivalent. Introduction to basic principles, theory, and laboratory practices of organic and biochemistry. This course serves as a prerequisite to CHEM 2450 only. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1402 General Chemistry I
Prerequisites: high school chemistry or CHEM 1300; two units of high school algebra or MATH 0301. Students are urged to take MATH 1302 concurrently. Fundamental laws and theories of chemistry from a physical-inorganic viewpoint, including the following structures and the periodic table, chemical bonding and solutions. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1403 General Chemistry II
Prerequisite: a grade of C or greater in CHEM 1402 or equivalent. Continuation of CHEM 1402. Topics include equilibrium, thermodynamics, kinetics, acid-base chemistry, electrochemistry, and coordination compounds. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1409 Chemistry and Society
A general education course for non-science majors which satisfies four hours of the lab science requirement in the University core curriculum. This course examines the impact of chemistry on today’s world. Ideas about the atom, the nature of radioactive elements, chemical bonding, plastics, pollution, drugs, and pesticides are sample topics which will be covered from both a scientific and historical perspective. Satisfies four hours of the lab science requirements in the University core curriculum. Three hours lecture, laboratory three hours per week. Four credit hours.

CHEM 2200 Computer Laboratory Computer
Prerequisites: CHEM 1403 and consent of department chair. Introduction to word processing, word addressing, spreadsheets, and structure drawing software geared to chemical applications. Introduction to computer bulletin boards and the internet. Computer applications to chemistry portfolio preparation. Lecture one hour, laboratory three hours per week. Graded CR/NC. Two credit hours.

CHEM 2300 Theory and Problems in Chemistry
Prerequisite: CHEM 1403 or consent of instructor. Correlation of principles of chemistry and mathematics to include stoichiometry and chemical equilibria. Recommended as an excellent review for students intending to take admissions examinations to professional schools or a refresher course for students returning to school in pursuit of a science degree. Lecture three hours per week. Three credit hours.

CHEM 2310 Analytical Chemistry I
Prerequisite: a grade of C or greater in CHEM 1403 or equivalent. Topics will include stoichiometry, acid-base equilibria, precipitation equilibria, complexation equilibria, and oxidation-reduction equilibria. Two hours lecture and one three-hour laboratory per week. Three credit hours.

CHEM 2311 Analytical Chemistry II
Prerequisite: a grade of C or greater in CHEM 2310 or equivalent. Theory and practice of some common instrumental methods of analysis. Potentiometry, UV-visible spectrophotometry, gas and liquid chromatography, and electrophoresis. Two hours lecture and one three-hour laboratory per week. Three credit hours.

CHEM 2450 Organic Chemistry-Short Course
Prerequisite: CHEM 1403 or 1401. A brief survey of the fundamental types of organic compounds, their nomenclature, classification, preparation, and reaction. Primarily designed for students in home economics and nursing. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 3150, 3151 Organic Chemistry Laboratory I and II
Corequisites: CHEM 3350, 3351. Selected experiments in organic chemistry to emphasize techniques, properties, and synthesis of organic compounds. Chemistry BS majors should take CHEM 3250 laboratory instead of CHEM 3151 laboratory with CHEM 3351. Laboratory three hours per week. One credit hour.

CHEM 3170 Physical Chemistry Laboratory I
Corequisites or prerequisites: PHYS 2122, CHEM 3370. An introduction to multivariable and statistical mechanics. Experiments include synthesis of compounds, measurement of physical and electrochemical properties, determination of heats of reaction and reaction rates, and superconductivity studies. Laboratory three hours per week. One credit hour.

CHEM 3171 Physical Chemistry Laboratory II
Corequisites: CHEM 3170. Prerequisite or corequisite or prerequisite: CHEM 3371. Synthesis of inorganic compounds together with measurement of quantum mechanical spectroscopic properties, magnetic susceptibility, and properties of macromolecules. Laboratory three hours. One credit hour.

CHEM 3250 Qualitative Organic Analysis Laboratory
Prerequisite: CHEM 3150. Application of advanced spectrophotometric techniques (IR and NMR) to the qualitative identification of organic compounds. Chemistry BS majors should take this laboratory instead of CHEM 3151 laboratory with CHEM 3351. Two three-hour laboratories per week. Two credit hours.

CHEM 3330 History of Chemistry
Prerequisite: 12 hours of chemistry. A survey of the growth and development of chemistry from antiquity to the present. Lecture three hours per week. Three credit hours.

CHEM 3340 Introduction to Inorganic Chemistry
Prerequisite: CHEM 2450 or 3351 (the latter may be taken as a corequisite). A study of descriptive inorganic chemistry to include the synthesis of compounds of the representative (A-subgroup) elements and the noble gases, as well as their chemical properties and applications. Less thorough treatment of transition metal compounds. Required for BA and BS majors. Lecture three hours per week. Three credit hours.

CHEM 3350, 3351 General Organic Chemistry I and II
Prerequisite: CHEM 1403. A study of carbon compounds and their derivatives to include introduction to organic synthesis, reaction mechanisms, structural problems, and interpretation of spectra. Lecture three hours per week. Three credit hours.

CHEM 3370 Physical Chemistry: Thermodynamics and Kinetics
Prerequisites: CHEM 2310, 2311. Corequisites or prerequisites: MATH 1452, PHYS 2322. An introduction to theoretical chemistry to include the study of gases and condensed phases, phase changes, solutions, chemical reactions, and reaction rates. Lecture three hours per week. Three credit hours.

CHEM 3371 Physical Chemistry: Quantum and Statistical Mechanics
Prerequisites: CHEM 2310, 2311. Corequisites or prerequisites: MATH 2453, PHYS 2322. An introduction to theoretical chemistry to include the study of quantum and statistical mechanics of atomic and molecular systems. Lecture three hours, recitation one hour, and laboratory three hours per week. Five credit hours.

CHEM 3572 Physical Chemistry for the Life Sciences
Prerequisites: CHEM 2310, 2311, MATH 1302 and 1303, PHYS 1322 and 1122. An introduction to theoretical chemistry, with emphasis on the application of physical laws to biochemical systems, such as purified proteins and nucleic acids. Topics include spectroscopic techniques, thermodynamics, and kinetics. Lecture three hours, recitation one hour, and laboratory three hours per week. Five credit hours.

CHEM 4190 Chemistry Seminar
Presentation of papers, discussion, analysis, and implications of experimental investigations in the natural sciences. Seminar serves as the capstone course for assessment. Required of senior chemistry majors in their final semester before graduation. One hour per week. One credit hour.

CHEM 4251 Organic Preparation
Prerequisite: CHEM 3151 or 3250. Advanced experiments in organic chemistry employing special apparatus and techniques. Dual-listed in the UALR Graduate Catalog as CHEM 5251. Two three-hour laboratories per week. Two credit hours.

CHEM 4340 Inorganic Chemistry
Prerequisites: CHEM 3340, 3371 (the latter may be taken as a corequisite). A theoretical treatment of inorganic chemistry to include atomic structure, valence bond, molecular orbital and ligand field theories; the crystalline state; thermodynamic and kinetic aspects of transition metal chemistry. Laboratory will reinforce concepts developed in lecture. Required for the BS major. Dual-listed in the UALR Graduate Catalog as CHEM 5340. Lecture two hours and laboratory three hours per week. Three credit hours.

CHEM 4350 Intermediate Organic Chemistry
Prerequisite: CHEM 3351. An elective course designed for students with special interests in organic chemistry who wish exposure to additional concepts beyond those covered in CHEM 3350, 3351. Dual-listed in the UALR Graduate Catalog as CHEM 5350. Lecture three hours per week. Three credit hours.

CHEM 4380 Introduction to Polymer Chemistry
Prerequisite: CHEM 3351, 3352 or 3250. Other courses recommended but not required are CHEM 3370, 3371, 3170, 3171, and 3572. Theoretical and practical aspects of polymer chemistry will be coordinated. Topics include history, types of polymerizations, kinetics, molecular weight, physical properties including thermal and spectroscopic characterization, biopolymers and engineering resins. Dual-listed in the UALR Graduate Catalog as CHEM 5380. Lecture two hours, laboratory three hours. Three credit hours.
CHEM 4399 Special Topics in Chemistry
Prerequisite: consent of instructor. A course for students interested in acquiring additional knowledge in selected topics in chemistry. Possible subjects include: chemical carcinogenesis, environmental chemistry, solid state chemistry, radiochemistry, macromolecules, surface chemistry, quantum chemistry, or others. Dual-listed in the UALR Graduate Catalog as CHEM 5399. Lecture three hours per week. Three credit hours.

CHEM 4100, 4200, 4300, 4400 Independent Study
Prerequisites: junior or senior standing, consent of the chairperson. Designed for students who want to carry out special investigations, which could include chemical education research or directed study of a specialized chemical topic of interest to the student. Topic and method of procedure must have approval of the supervising faculty member. Frequent conferences with the instructor and a study of chemical literature with a final written report are required. The student is expected to spend four to six hours per week on the project 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. One, two, three, or four credit hours.

CHEM 4411 Instrumental Analysis
Prerequisites: CHEM 2310, 2311, 3350; PHYS 2322, 2122 or 1322, 1122 with consent of instructor. A study of the most common modern instrumental methods of analysis, to include topics in spectroscopy, electrochemistry, and chromatography. Dual-listed in the UALR Graduate Catalog as CHEM 5411. Lecture three hours, one four-hour laboratory per week. Four credit hours.

CHEM 4420 Biochemistry
Prerequisites: CHEM 2310, 2311, 3151, 3351. A basic course covering the chemistry and metabolism of proteins, lipids, carbohydrates, and nucleic acids, and the action of vitamins, hormones, and enzymes. Dual-listed in the UALR Graduate Catalog as CHEM 5420. Lecture three hours, laboratory three hours. Four credit hours.

CHEM 4289, 4389, 4489 Undergraduate Research
Prerequisites: consent of department chairperson, junior or senior standing, compliance with approved guidelines (available from chairperson) and comments in the printed schedule. Trains the student to analyze, plan, and conduct experimental work on a chemical problem. Frequent conferences and a study of chemical literature with a final written report are required. The student is expected to spend four to six hours per week on the project 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. Two, three, or four credit hours.
DEPARTMENT OF EARTH SCIENCE

Earth science includes the disciplines of geology, meteorology, oceanography, Geographic Information Systems (GIS), and the application of these disciplines in the environmental sciences. The department’s goals are to relate these disciplines to intelligent living with the earth and to understand the interplay between earth and humanity. Students are encouraged to obtain a scientific understanding of earth systems on a global scale.

The Earth sciences provide career opportunities for employment in industry, government, and teaching. Students interested in this area of study are urged to consult the departmental faculty regarding curricular plans and career goals. The department offers a bachelor of science in geology, a minor in geology, a curriculum leading to secondary teacher licensure in science education, and courses for a concentration in geophysics.

The department offers course work at two levels:
- University core curriculum requirement: ERSC 1302/1102 and 1303/1103 meet the science laboratory course requirement.
- Professional courses, numbered 2310 and above, are designed for geology majors and minors, engineering technology majors, students interested in science teaching, and for other students with deeper interest in the field. For example, ERSC 3360 and 4363 are of interest to biology students; ERSC 3372, 4321, 4322, 4323, 4421, and 4379 are recommended for all students in environmental fields; and ERSC 3371 for students in engineering technology or construction management.

Admission Requirements

Students desiring admission to the geology degree program must have a cumulative grade point average of at least 2.00 and a grade of C or greater in the following courses: ERSC 1302/1102 and 1303/1103, SPCH 1300, MATH 1302 or equivalent or any course for which MATH 1302 is a prerequisite. Proficiency in English (written and oral) must be demonstrated by qualifying for enrollment in RHET 1312.

Major in Geology

The bachelor of science in geology requires a total of 39 credit hours in geology: ERSC 1302/1102, 1303/1103, 2310, 2320, 3311, 3330, 3350, 3360, 4190; 4626 (or equivalent of six hours of field geology); and six hours of upper-level earth science electives.

In addition, the following support courses are also required: CHEM 1402, 1403; PHYS 1321, 1121, 1322, 1122; or 1381, 1181, 1382, 1182; or 2321, 2121, 2322, 2122; and six hours from any combination of calculus (after MATH 1451), computer science, or statistics.

Minor in Geology

A minor in geology requires 20 hours in the following courses: ERSC 1302/1102, 1303/1103, and 12 hours of earth science electives.

Laboratory Science Requirement Courses

The core curriculum requirements for science laboratory courses may be met by ERSC 1302/1102 Physical Geology lecture and laboratory and ERSC 1303/1103 Historical Geology lecture and laboratory.

BS in Earth Science: Four-year Curriculum

<table>
<thead>
<tr>
<th>Freshman Year (28 hours)</th>
<th>Junior Year (30 hours)</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1402 General Chemistry I</td>
<td>Physics (4 hours)</td>
</tr>
<tr>
<td>CHEM 1403 General Chemistry II</td>
<td>ERSC 3330 Structural Geology</td>
</tr>
<tr>
<td>ERSC 1302 Physical Geology</td>
<td>ERSC 3360 Paleobiology</td>
</tr>
<tr>
<td>ERSC 1102 Physical Geology Laboratory</td>
<td>ERSC 3311 Igneous and Metamorphic Petrology</td>
</tr>
<tr>
<td>ERSC 1303 Historical Geology</td>
<td>Elective (3 hours)</td>
</tr>
<tr>
<td>ERSC 1103 Historical Geology Laboratory</td>
<td>ARHA 2200 Introduction to Visual Art,</td>
</tr>
<tr>
<td>RHET 1311 Composition I</td>
<td>MUHL 2200 Introduction to Music,</td>
</tr>
<tr>
<td>RHET 1312 Composition II</td>
<td>or DRTH 2200 Introduction to Theatre and Dance</td>
</tr>
<tr>
<td>MATH 1451 Calculus I,</td>
<td>not taken above (2 hours)</td>
</tr>
<tr>
<td>or Any CPSC or STAT course</td>
<td>HIST 2311 U.S. History to 1877,</td>
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<tr>
<td></td>
<td>HIST 2312 U.S. History since 1877,</td>
</tr>
<tr>
<td></td>
<td>or POLS 1310 American National Government</td>
</tr>
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<td></td>
<td>Social science core requirements (3 hours)</td>
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<td></td>
<td>Courses in minor (6 hours)</td>
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<tr>
<td>Summer (6 hours)</td>
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<tr>
<td>ERSC 4626 Field Geology</td>
<td>(or equivalent six hours of field geology)</td>
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<tr>
<td>Senior Year (31 hours)</td>
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<tr>
<td>ERSC 3350 Sedimentology</td>
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<tr>
<td>ERSC 4190 Senior Seminar</td>
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<tr>
<td>ERSC upper-level elective (3 hours)</td>
<td></td>
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<tr>
<td>Courses in minor (6 hours)</td>
<td></td>
</tr>
<tr>
<td>Social science core requirement (3 hours)</td>
<td></td>
</tr>
<tr>
<td>Electives¹ (15 hours)</td>
<td></td>
</tr>
</tbody>
</table>

¹. Care must be taken to choose electives so that the total number of upper-level hours completed does not fall below 45 hours. Specific requirements in earth science total 22 hours of upper-level work, and most minors will require 12 hours at upper level.
Secondary Teacher Licensure in Science Education

A program leading to initial licensure by the Arkansas Department of Education in the area of secondary education is available to students at UALR. See “Secondary Teacher Licensure” on page 45 for a description of the requirements. Because completing all the components of the secondary education program in four years requires careful planning, students should see the department chair of their chosen major for advising as early as possible after acceptance at UALR.

Courses in Earth Science (ERSC)

ERSC 1102 Physical Geology Laboratory
Prerequisite or corequisite: ERSC 1302. A laboratory course designed to accompany ERSC 1302. Students observe, gather and manipulate data, interpret data, and make field measurements using minerals, rocks, graphs, and maps. The laboratory meets for two hours per week. One credit hour.

ERSC 1103 Historical Geology Laboratory
Prerequisite or corequisite: ERSC 1303. A laboratory course designed to accompany ERSC 1303. Students are involved with geologic data gathering, manipulation, and interpretation along with field measurements and problem solving. Two hours laboratory per week. One credit hour.

ERSC 1302 Physical Geology
An introduction to the science of geology, the geological view of the human environment, how geologists learn about Planet Earth, and how society and geology interact. Active learning applied to natural processes shaping the earth’s surface, introducing the solid and fluid earth, and historical development of geological paradigms. Three hours lecture per week. Three credit hours.

ERSC 1303 Historical Geology
An introduction to the science of geology, how geologists have learned about the Earth through geologic time as a theme. Active learning applied to various measurements of time, the documentation of evolutionary changes presented by the geologic record, and the development of geologic paradigms used in interpreting this record. Three hours lecture per week. Three credit hours.

ERSC 2310 Mineralogy
Prerequisites: ERSC 1302/1301, CHEM 1402. Introduction to mineralogy including the silicate and non-silicate groups, their crystalline structure, and their occurrence and origins as determined by chemical equilibrium. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 2320 Geologic Methods
Prerequisite: ERSC 1302/1301, 1303/1103. Basic field, laboratory, and computer methods in geology. Outcrop description and interpretation, sampling techniques, sample preparation, measuring stratigraphic section, sediment analysis, Brunton compass techniques, geologic mapping, map interpretation, stream flow measurements, ground water measurements, and computer techniques. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 3311 Igneous and Metamorphic Petrology
Prerequisite or corequisite: ERSC 2310. Composition, characteristics, classification, occurrence, and petrogenesis of the igneous and metamorphic rocks. Megascopic and microscopic methods of description. Two hours lecture, three hours laboratory or equivalent per week. Three credit hours.

ERSC 3312 Optical Mineralogy
Prerequisite: ERSC 2310. Principles and methods of optical mineralogy; use of petrographic microscope in identification of minerals by immersion and in thin section. Two hours lecture, two hours laboratory per week. Three credit hours.

ERSC 3330 Structural Geology
Prerequisites: ERSC 2310, MATH 1303. Analysis of rock strength and rock deformation, analysis and description of folds, faults, cleavage, joints, and igneous bodies. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 3350 Sedimentology
Prerequisites: ERSC 2310, 2320. Analysis of modern sediments, properties of sedimentary grains, sedimentary processes; modern environments; composition, classification, lithification of sedimentary rocks. Megascopic and microscopic methods. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 3360 Paleobiology
Prerequisites: ERSC 1303/1103, or BIOL 1401, or consent of instructor; ERSC 2320 recommended. 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 paleobiological principles that can be demonstrated by the major groups of invertebrates that are common in the geologic record. Two hours lecture, three hours laboratory per week; one I-2 day field trip. Three credit hours.

ERSC 3372 Surficial Hydrology
Prerequisites: MATH 1304 or 1311 and consent of instructor; junior standing in earth science, physics, chemistry, biology, environmental health science, or engineering technology. Hydrologic cycle, basin analysis, runoff analysis, stream hydraulics, flooding, case histories, field methods in hydrology, hydrologic planning. Three hours lecture per week. Three credit hours.

ERSC 3380 Oceanography
Prerequisite: 4 hours of earth science, biology, chemistry, or physics. 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.

ERSC 3390 Weather Studies
Prerequisite: 4 hours of earth science, biology, chemistry, or physics. This course provides an overview of how the distribution of heat, atmospheric circulation, humidity, and air pressure forms local, regional and global weather conditions. The course will include analysis of recent meteorological events that demonstrate basic principles of how weather patterns evolve. Three hours lecture per week. Three credit hours.

ERSC 4190 Senior Seminar
Prerequisite: senior standing in earth science. Topics in philosophy of geology, environmental geology, or plate tectonics. May be repeated once if topics differ. One hour per week. One credit hour.

ERSC 4100, 4200, 4300 Independent Problems
Prerequisite: consent of instructor, generally given only with senior standing and/or 20 hours of geology. Field or laboratory problem in consultation with instructor. One, two, or three hours or equivalent per week. One, two, or three credit hours.

ERSC 4304 Geology of North America
Prerequisites: ERSC 1303/1103, 3360. Detailed history of North America and its life forms as interpreted from rock and fossil records. Principles of interpretation, geologic and biologic succession of events, and advanced individual interpretation of geologic maps, with reports. Two hours lecture, two hours laboratory (or equivalent) per week. Three credit hours.

ERSC 4313 Petrography
Prerequisites: ERSC 3312, four hours from ERSC 3311 or 3350. The microscopic study of igneous, sedimentary, and metamorphic rocks. Two hours lecture, two hours laboratory per week. Three credit hours.

ERSC 4321 Geomorphology
Prerequisites: ERSC 1302/1102, 2320, or consent of instructor. The study of the shaping of the earth’s surface. The processes of weathering, mass movement, erosion, and deposition involved in the evolution of landforms; geomorphic cycles and regional physiography; applications to environmental studies. Laboratory includes analysis of maps, aerial photos, and field work. Dual-listed as ERSC 3321. Two hours lecture, three hours laboratory or field study per week. Three credit hours.

ERSC 4322 Environmental Geology
Prerequisite: consent of instructor based on completion of ERSC 1302/1102, GEOG 1311, or the equivalent. Humans as a geologic agents, geologic hazards in the environment, geology and land use studies, urban geology, and case histories. Dual-listed as ERSC 3322. Three hours lecture per week. Three credit hours.

ERSC 4323 Geology of Arkansas
Prerequisites: ERSC 1302/1102, consent of instructor. Regional geomorphology, structure, stratigraphy, and paleontology of Arkansas. Includes field trips to Ozark dome, Ouachita fold belt, Arkansas Valley, and Mississippi Embayment/Gulf Coastal Plain. Dual-listed as ERSC 3323. Three hours lecture per week, weekend field trips. Three credit hours.

ERSC 4331 Geotectonics
Prerequisite: ERSC 3330. Continental crust, tectonic elements, and tectonics of North America; oceanic crust, tectonic elements, and the relationships of these to plate tectonics; anatomy of mountain belts. Dual-listed as ERSC 5331. Three hours lecture per. Three credit hours.

ERSC 4351 Stratigraphy
Prerequisite: ERSC 3350. Stratigraphic principles and nomenclature, concepts of facies, depositional systems, basin analysis, seismic stratigraphy. Three hours lecture per week. Three credit hours.

ERSC 4352 Stratigraphic Analysis
Prerequisite: ERSC 3350. Recognition of ancient sedimentary environments, analysis of facies, depositional systems, basin analysis, seismic stratigraphy. Three hours lecture per week. Three credit hours.
ERSC 4353 Geology and Ecology of Bahamas
Prerequisites: Eight hours of core science and consent of instructor. This course explores the geology and ecology of the shallow-water marine environment by examining the preeminent modern example, the Bahamas platform. The Bahamas provide an excellent model for understanding modern and ancient carbonate and reef deposits, and variety of terrestrial/aquatic habitats. Biological processes are ultimately responsible for many of the geological features of the Bahamas, so the course considers the biology/ecology of marine organisms in addition to geological topics. The field component is based at the Gerace Field Center for Geological, Biological, and Anthropological Research on San Salvador Island, Bahamas. Seventy-five hours of lecture/laboratory/field activity. Dual-listed as ERSC 3353. Three credit hours.

ERSC 4355 Coastal Marine Geology
Prerequisite: six hours of earth science. A study of inshore and near-shore geological processes, sedimentation patterns, and landform development. Course offered through Gulf Coast Research Laboratory, Ocean Springs, Mississippi. Three credit hours.

ERSC 4363 Paleoecology
Prerequisite: ERSC 3360. Reconstruction of ancient sedimentary environments based on fossil content. Will include study of general ecological principles, morphologic adaptation of organisms to their environments, and analysis of present and past community structures. Three hours lecture per week and a one week field trip. Three credit hours.

ERSC 4371 Engineering Geology
Prerequisite: MATH 1303 or higher or the consent of instructor. 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 materials, slope stability analysis and slope failure mitigation, earthquake engineering, hydrologic system management, and the application of GIS and geology. Dual-listed as ERSC 5371. Two hours lecture, two hours laboratory per week. Three credit hours.

ERSC 4373 Hydrogeology
Prerequisites: MATH 1304 or 1311; ERSC 3330. Ground water occurrence, flow, porosity, permeability, aquifer analysis, geology of ground water, water well logging, well development, case histories, field methods, hydrogeologic planning. Dual-listed as ERSC 5373. Three hours lecture per week. Three credit hours.

ERSC 4389 Undergraduate Research
Prerequisite: senior honors standing in geology. Various topics for thorough research selected by students in consultation with an advisor. Field work and/or experimental or laboratory work resulting in a report to be critiqued by at least two faculty members (no oral defense). The student is expected to spend at least nine hours per week on the project. 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. Three credit hours.

ERSC 4391 Cooperative Education in Earth Science
Prerequisites: Junior undergraduate standing or graduate standing and consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. This course requires a minimum of 200 semester work hours. Three credit hours.

ERSC 4195, 4295, 4395 Internship in Earth Science
Prerequisites: senior standing in geology, consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry, and consulting firms. Forty hours supervised work per credit hour. One, two, or three credit hours.

ERSC 4421 Introduction to Geographic Information Systems (GIS)
Prerequisites: ERSC 2320 or ENHS 3415 or BIOL 4309, or consent of instructor. This course introduces Geographic Information Systems (GIS) and the use of spatial data for problem-solving in science. The lecture portion of the course focuses on the data models used to represent spatial features and on the processes involved in creating, acquiring, analyzing, and displaying georeferenced information. The laboratory portion of the course employs a project-based methodology including applications from geography, biology, environmental science, and political science to foster basic GIS software proficiency. Dual-listed as ERSC 5421. Two hours lecture per week, four laboratory hours. Four credit hours.

ERSC 4422 Applied GIS
Prerequisites: BIOL/ERSC 4421 or consent of instructor. This course builds on the fundamental concepts of Geographic Information Systems (GIS) from ERSC 4421 Introduction to GIS. It focuses on advanced applications in GIS with an emphasis on problem-solving, advanced analysis techniques, and database management. Two lecture hours per week, four laboratory hours. Four credit hours.

ERSC 4426 Introduction to Remote Sensing
Prerequisites: ERSC/BIOL 4421 or consent of instructor. This course introduces the fundamentals of manipulating and interpreting the electromagnetic spectrum. The lecture portion of the course covers concepts of remote sensing, including how data is collected, processed, analyzed, and interpreted. The lab portion of the course is focused on building proficiency in several images processing software programs and the use of spatial data for problem-solving in science. Two lecture hours per week, four laboratory hours. Four credit hours.

ERSC 4499, 4299, 4399, 4499 Special Topics
Prerequisite: consent of instructor. Advanced and specialized topics in the geological sciences, especially those of current interest. Refer to semester schedule for special topic offered. Credit will vary depending upon course topic. One, two, three, or four hours or equivalent per week. One, two, three, or four credit hours.

ERSC 4626 Field Geology
Prerequisites: ERSC 2320, 2310, 3330, and 3311 or 3350. Structural and stratigraphic mapping techniques, detailed mapping of igneous, sedimentary, and metamorphic terrains, air photo and map interpretation. Six weeks of field work and instruction. Six credit hours.
Department of Health Sciences

The health sciences program is designed to prepare students as health professionals in community health agencies, health maintenance organizations, and wellness programs in business and industry. It is also designed to prepare students to enter graduate programs.

The student seeking a bachelor’s degree in health sciences has three options: the health sciences major (with a minor chosen from another program); the health sciences major/minor with emphasis in community health promotion; and the health sciences major/minor with emphasis in health and exercise science in secondary education.

A minor in health sciences and a minor in health and exercise science are also offered.

The health sciences program offers leisure science and wellness courses to help students develop appreciation, knowledge, and understanding of the importance of exercise to daily living; gain knowledge and understanding of how the human body moves; and develop the ability to apply this knowledge. Leisure science and wellness courses also help students develop a satisfactory level of skill in leisure time activities such as sports and aquatics. A basic understanding of the body and its functions can be gained through leisure science and wellness offerings. Emphasis is placed on developing an individual lifetime program to improve health-related components of fitness and wellness.

Admission Requirements

Students who select health sciences as a major must have completed a minimum of 12 credit hours with a cumulative grade point average of 2.00 or greater and must have completed HSCI 1370 Personal Health (or an equivalent course) with a grade of C or greater. Students who entered UALR by contract must complete the contract before they are eligible for admission to the health sciences program. Decisions regarding course equivalency and situations in which students have tested out of courses or transferred credit from other programs will be made by the program coordinator.

BS in Health Sciences (Major only):

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1413</td>
<td>Human Biology, or BIOL 1411 Introduction to Human Anatomy and Physiology I and BIOL 1412 Introduction to Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>BIOL 2400</td>
<td>Human Microbiology, or BIOL 2401 Microbiology</td>
</tr>
<tr>
<td>HSCI 2401</td>
<td>Nutrition</td>
</tr>
<tr>
<td>HSCI 2302</td>
<td>Exercise, Wellness, and Lifestyle, or HSCI 3302 Exercise Physiology, or HSCI 3402 Kinesiology, or HSCI 4402 Fitness Management</td>
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</tbody>
</table>

Two courses (6 hours) from the following:

- RHET 3316 Writing for the Workplace
- CPSC 1370 Computer Literacy
- MGMT 3300 Organizational Behavior and Management
- GERH 2300 Introduction to Aging and the Elderly
- GERH 4315 Interdisciplinary Health Care of the Elderly
- GERH 4336 The Social Aspects of Death and Dying
- ENHS 2320 Introduction to Environmental Health Sciences

1. See “Core Requirements for Bachelor Degrees” on page 27.

Required HSCI Courses (35 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>HSCI 1370</td>
<td>Personal Health</td>
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<tr>
<td>HSCI 3195</td>
<td>Practicum in Health Education</td>
</tr>
<tr>
<td>HSCI 3196</td>
<td>Practicum in Exercise Science</td>
</tr>
<tr>
<td>HSCI 3372</td>
<td>Advanced First Aid, or HSCI 4372 First Aid Instructor Training</td>
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<tr>
<td>HSCI 3374</td>
<td>Community Health Agencies</td>
</tr>
<tr>
<td>HSCI 3377</td>
<td>Drug Education, or HSCI 4373 Controversial Issues in Health Education</td>
</tr>
<tr>
<td>HSCI 4371</td>
<td>Health Education Concepts and Applications</td>
</tr>
<tr>
<td>HSCI 4374</td>
<td>Family Life and Sex Education</td>
</tr>
<tr>
<td>HSCI 4376</td>
<td>Mental Health Education</td>
</tr>
<tr>
<td>HSCI 4378</td>
<td>Organization and Administration of Health Education Programs</td>
</tr>
<tr>
<td>HSCI 4379</td>
<td>Methods and Techniques of Teaching Health Education</td>
</tr>
<tr>
<td>HSCI 4695</td>
<td>Internship in Health Education, or HSCI 3391 Cooperative Education in Health Education and HSCI 4391 Cooperative Education in Health Education</td>
</tr>
</tbody>
</table>

Minor (18-21 hours)

Electives (6 hours)
BS in Health Sciences (Major/Minor) with Emphasis in Community Health Promotion: Required Courses

This course of study is designed to produce a baccalaureate student with training to enter the specialized field of health sciences in a community setting. It is also designed to assist the entry-level health educator in taking the National Health Education Credential examination.

Core Requirements1 (44 hours)

Professional Area Requirements (30 hours)

**HSCI 2302 Exercise, Wellness, and Lifestyle, HSCI 3302 Exercise Physiology, HSCI 3402 Kinesiology, or HSCI 4402 Fitness Management**

Five courses (15 hours) from the following:

- BIOL 1413 Human Biology, or BIOL 1411 Introduction to Human Anatomy and Physiology I and BIOL 1412 Introduction to Human Anatomy and Physiology II
- BIOL 2400 Human Microbiology or BIOL 2401 Microbiology
- HSCI 2302 Exercise, Wellness, and Lifestyle, HSCI 3302 Exercise Physiology, HSCI 3402 Kinesiology, or HSCI 4402 Fitness Management
- HSCI 3195 Practicum in Health Education
- HSCI 3377 Drug Education

Required Health Sciences Courses (38 hours)

- HSCI 1370 Personal Health
- HSCI 3195 Practicum in Health Education
- HSCI 3196 Practicum in Exercise Science
- HSCI 3372 Advanced First Aid or HSCI 4372 First Aid Instructor Training
- HSCI 3374 Community Health Agencies
- HSCI 3377 Drug Education

Electives (12 hours)

**Major/Minor in Health and Exercise Science in Secondary Education**

This course of study is designed to produce baccalaureate students prepared to become licensed teachers in the area of physical education, wellness, and leisure in secondary public schools who may also obtain an endorsement to coach athletics. See “Secondary Teacher Licensure” on page 45 for the curriculum. The licensure in secondary education occurs in three sequential blocks. Please contact Dr. Donna Quimby for advising as early as possible to reduce any possible delays in the progress toward the degree.

**Minor in Health Sciences**

The minor in health sciences is designed for students interested in community health education and requires 18 credit hours including these courses:

- HSCI 1370 Personal Health
- HSCI 2401 Nutrition, or HSCI 2302 Exercise, Wellness, and Lifestyle, or HSCI 3302 Exercise Physiology
- HSCI 3377 Drug Education or HSCI 4373 Controversial Issues in Health Education
- HSCI 4374 Family Life and Sex Education
- HSCI 4376 Mental Health Education or HSCI 4371 Health Education Concepts and Applications
- HSCI 3374 Community Health Agencies or HSCI 4378 Organization and Administration of Health Education Programs

**Minor in Health and Exercise Science**

The minor in health and exercise science is designed for students seeking teacher certification in health and physical education and/or a coaching endorsement from the State Department of Education. This minor requires 19 hours consisting of HSCI 2302, 3210, and 3220 plus 12 upper-level hours from the courses required for the major/minor in health sciences with emphasis in health and exercise science in secondary education.

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1. See “Core Requirements for Bachelor Degrees” on page 27.
Courses in Health Sciences (HSCI)

HSCI 1101 Dieting and Weight Control
A practical short course designed to teach the proper methods of dieting and controlling body weight. Students will be taught how to determine, achieve, and maintain their correct body mass by using the scientific principles of proper nutrition and exercise. The futility of using drugs and fad diets to control weight will be explained. One credit hour.

HSCI 1102 Substance Abuse and Addiction
A practical short course designed to provide basic knowledge of drug abuse and addiction. Students will evaluate the role of drugs and other addictive behaviors in their life, and identify their risk factors for abuse or dependence. Students will be given information on available resources and options for behavior change and coping skills. One hour lecture/discussion per week. One credit hour.

HSCI 1103 Smoking Cessation
A practical short course designed to explore nicotine dependency/addiction and smoking cessation options. Based on assessment of individual tobacco use and knowledge of the advantages and disadvantages of smoking cessation options, students will be taught how to identify stressors in their lives and explore possible ways of changing responses in order to develop satisfactory reactions to these stressors. The approach to this course is both personal and practical. One hour lecture/discussion. One credit hour.

HSCI 1104 Stress Management
A practical short course designed to assist the individual in identifying sources and situations that trigger reactions, both positive and negative, that display the physiological, psychological, or social effects. The individual will be taught how to identify stressors in their lives and explore possible ways of changing responses in order to develop satisfactory reactions to these stressors. The approach to this course is both personal and practical. One hour lecture/discussion. One credit hour.

HSCI 1170 Cardiopulmonary Respiration
Current training procedures used on individuals with heart or breathing emergencies. Appropriate first aid techniques also included. Two hours lecture/laboratory. One credit hour.

HSCI 1370 Personal Health
Designed to develop the understanding, attitudes, and practices which contribute to optimal physical, mental, and social well-being. Emphasis on major health problems and causes of death in various age groups. Three hours lecture per week. Three credit hours.

HSCI 2302 Exercise, Wellness, and Lifestyle
Recommended prerequisite: BIOL 1401 or 1413. Designed to equip students with the information, opportunities, and strategies needed to improve their physical fitness, from nutrition and weight control to cardiovascular endurance. Practical applications of current theory in nutrition and exercise physiology that students can apply to their self-improvement plan. All students will be given a fitness evaluation at the beginning and at the end of the semester, a strategy for long-term smoking cessation. One hour lecture/discussion per week. One credit hour.

HSCI 2302 Exercise, Wellness, and Lifestyle
Recommended prerequisite: BIOL 1401 or 1413. Designed to equip students with the information, opportunities, and strategies needed to improve their physical fitness, from nutrition and weight control to cardiovascular endurance. Practical applications of current theory in nutrition and exercise physiology that students can apply to their self-improvement plan. All students will be given a fitness evaluation at the beginning and at the end of the semester, a strategy for long-term smoking cessation. One hour lecture/discussion per week. One credit hour.

HSCI 2320 Health Education
A community health education course designed to provide basic knowledge of health education and health promotion techniques and basic understanding necessary to sound exercise programs. Three hours lecture/laboratory per week. Three credit hours.

HSCI 3195 Practicum in Health Education
Prerequisites: HSCI 2302, consent of program coordinator and instructor of HSCI 2302. Practicum students will administer physical fitness tests to those enrolled in HSCI 2302 at both the beginning and end of the semester. They will help prescribe exercise and be responsible for helping HSCI 2302 class members achieve their stated fitness goals. This aid will consist of advice and motivation, leadership of exercise groups, nutrition planning, and modification of exercise prescriptions as required. One credit hour for 30 clock hours. One credit hour.

HSCI 3196 Practicum in Exercise Science
Prerequisites: HSCI 2302, consent of program coordinator and instructor of HSCI 2302. Practicum students will administer physical fitness tests to those enrolled in HSCI 2302 at both the beginning and end of the semester. They will help prescribe exercise and be responsible for helping HSCI 2302 class members achieve their stated fitness goals. This aid will consist of advice and motivation, leadership of exercise groups, nutrition planning, and modification of exercise prescriptions as required. One credit hour for 30 clock hours. One credit hour.

HSCI 3210 Teaching Individual Sports
The course is an examination of the theory and practice of teaching and coaching: tennis and golf. Two hours lecture per week. Two credit hours.

HSCI 3211 Health and Safety in Early Childhood
A practical short course designed to provide an introductory experience to the basic concepts of health and safety in early childhood environments. Specific attention is given to recognition of common illnesses in young children, infection control practices, in jury prevention, and basic emergency treatment procedures. Some of the regulations that guide health and safety practices in early educational environments will be examined. Two hours lecture per week. Two credit hours.

HSCI 3220 Teaching Team Sports
The course is an examination of the theory and practice of teaching and coaching: basketball, volleyball, and baseball. Two hours lecture per week. Two credit hours.

HSCI 3302 Exercise Physiology
Prerequisites: BIOL 1411, 1412 or their equivalents, or consent of instructor. The relationship between regular, moderate exercise and the resultant increase in the effectiveness of heart, lungs, and muscles. Students learn to assess fitness by the use of various laboratory instruments and techniques and to improve fitness by the judicious use of specific training programs. Two hours lecture, two hours laboratory. Three credit hours.

HSCI 3310 Coaching Theory and Methodology
Course is designed to improve the knowledge and understanding of methods and coaching theories. Students learn how to manage young athletes in conditioning, skill development, competition, motivation, and strategies. Three hours lecture per week. Three credit hours.

HSCI 3320 History of Physical Education
A study of the historical development of organized physical activity designed to improve the understanding and appreciation of the purpose, value, nature, scope, and significance of physical education throughout history. Three hours lecture per week. Three credit hours.

HSCI 3322 Advanced First Aid
Training individuals to perform ethical and legal obligations in rendering competent first aid in case of accident or injury until a physician can be found. American Heart Association advanced first aid certification on successful completion of the course. Three hours lecture per week. Three credit hours.

HSCI 3374 Community Health Agencies
Principles and practices of public health and voluntary health programs and agencies. Students make guided observation in laboratory situations and engage in seminars. Three hours lecture per week. Three credit hours.

HSCI 3377 Drug Education
An in-depth study of drug education designed to help teachers, administrators, and other special interest groups present drug education programs. Three hours lecture. Three credit hours.

HSCI 3391 Cooperative Education in Health Education
Prerequisites: junior standing, acceptance as a health sciences major, minimum GPA of 2.50, and consent of program coordinator. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their health sciences career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

HSCI 3402 Kinesiology
Prerequisites: BIOL 1411, 1412, or the equivalents. An anatomical and physiological analysis of body movements with relation to the musculature, articulations, and nervous tissues involved. Does not count toward a major or a minor in biology. Two hours lecture, four hours laboratory per week. Four credit hours.

HSCI 4330 Activity and Sports Management
A study of the organization and administration of programs in physical education and sports. Topics include the development of administrative policy regarding budget, finance, marketing, philosophy, public relations, facilities, sports law, and program management. Dual-listed in the UALR Graduate Catalog as HSCI 5330. Three hours lecture. Three credit hours.

HSCI 4340 Adaptive Physical Education
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 their complications 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. Dual-listed in the UALR Graduate Catalog as HSCI 5340. Three hours lecture per week. Three credit hours.

HSCI 4350 Methods and Techniques of Teaching Physical Education
A study of the methods and techniques of teaching physical activity in high school physical education programs. Emphasis is on opportunities to learn about organizing and planning programs, developing lesson plans, selection of activities, and evaluation procedures. Three hours lecture per week. Three credit hours.

HSCI 4371 Health Education Concepts and Applications
Examination of the concepts, philosophy, and applications of health education in public, private, professional, and commercial organizations that exist to improve and maintain health. Dual-listed in the UALR Graduate Catalog as HSCI 5371. Three hours lecture per week. Three credit hours.

HSCI 4372 First Aid Instructor Training
Prerequisites: HSCI 3372, BLS course, or Red Cross First Aid. Students under supervision develop a lesson plan, observe teachers, develop tests, and participate in the American Red Cross first aid program. Instructor training course for candidates to become certified by the American Red Cross to teach standard first aid and personal safety. Three hours lecture per week. Three credit hours.
LESC 1100 Team Sports I
Theory and practice needed to understand and develop an appropriate level of skill in flag football and volleyball. One credit hour.

LESC 1101 Team Sports II
Theory and practice needed to understand and develop an appropriate level of skill in basketball and softball. One credit hour.

LESC 1102 Sports Officiating
Emphasis is placed on developing the mechanics of signals, rules, and regulations to successfully officiate football, basketball, baseball, and softball. Practical applications of signals, rules, and regulations will be applied by the actual officiating of games. One credit hour.

LESC 1103 Beginning Ice Skating
For individuals who do not know how to ice skate. Emphasis on fundamentals, safety, and the basic steps. One credit hour.

LESC 1105 Beginning Swimming
For nonswimmers. Emphasis on fundamentals of swimming and water safety and the basic strokes: front crawl, back crawl, elementary backstroke, and side stroke. One credit hour.

LESC 1106 Scuba Diving
Theory and practice in the skills involved in the safe and effective use of snorkel, fins, face mask, and scuba equipment. Deep water training sessions are required for certification. A fee is charged for use of equipment and expense of deep water training sessions. One credit hour.

LESC 1107 Water Polo
Fundamental knowledge, techniques, and skills necessary to develop an understanding of and ability to play water polo. One credit hour.

LESC 1108 Water Aerobic Exercise
This course incorporates the health-related fitness components of muscular strength and muscular endurance and cardiovascular endurance in an aquatic environment. Due to increased resistance provided by water overload training, improvement should occur in these areas. Deep water exercises such as water walking and water jogging along with aerobic exercises done to music, combine to make up a stress-free fitness program. The ability to swim is not a prerequisite for water aerobic exercise. One credit hour.

LESC 1109 Racquetball
Emphasis is on developing skills in racquetball, presenting information on equipment safety, preliminaries to the strokes in racquetball, and introduction of the game itself. Practical application will enable the novice to develop both physical and mental skills to achieve in racquetball. One credit hour.

LESC 1111 Restrictive Activity
Designed for men and women who are physically unable to participate in other physical education activities. A statement from the family physician is required regarding the nature of the physical problem. One credit hour.

LESC 1112 Judo
Theory and practice of fundamentals of judo. Emphasis on the development of skills, rules, regulations, and necessary equipment. One credit hour.

LESC 1113 Karate
Theory and practice of fundamentals of karate. Emphasis on the development of skills, rules, regulations, and necessary equipment. One credit hour.

LESC 1114 Self-Defense
Fundamentals of self-defense designed for the individual interested in studying the scientific principles of gravity and body control over opposing forces as a self-protective device. One credit hour.

LESC 1115 Hunter Safety
A basic course in the principles of safe hunting. Qualifies students over 21 years of age for an Arkansas Game and Fish Commission Certificate as a Hunter Safety Instructor. One credit hour.

LESC 1116 Beginning Tennis
Emphasis on rules, scoring, selection of racket, grip, footwork, and body positioning. Also emphasizes forehand, backhand, serve, net volley, lob, fundamental strategy, and techniques of singles and doubles play. One credit hour.

LESC 1117 Beginning Golf
Theory and practice of fundamental skills and techniques of golf. Emphasis on rules and etiquette, use of one wood and three irons, grip, stance, backswing, head position, follow-through, approach shots, full strokes, and putting. A fee is charged. Held off campus. One credit hour.

LESC 1118 Beginning Badminton
Theory and practice of fundamental skills and techniques of badminton. Emphasis on shot selection and strategy and techniques of singles and doubles play. One credit hour.

LESC 1119 Beginning Bowling
Theory and practice of fundamentals of bowling. Emphasis on four-step approach, consistency, body position, release, spot bowling, follow-through, timing, rebound, scoring, rules, and bowling etiquette. A fee is charged. Held off campus. One credit hour.

LESC 1120 Beginning Horseback Riding
Fundamental knowledge, techniques, and skills needed to develop appropriate skill. Emphasis on care of and adjustment to the horse and safety in riding. The walk, trot, canter, and introduction of jumping will also be emphasized. A fee is charged. Held off campus. One credit hour.

LESC 1121 Fencing I Beginning
An introduction to foil fencing. Designed to provide a sound basic understanding of the history, rules, etiquette, and safety aspects of the sport of fencing. Develops fundamental technical and tactical skills needed for novice-level competition through emphasis on basic offense and defense, continuation of attack, compound attacks, and practical bouting. One credit hour.
LESC 1122 Tumbling
This course includes the theory and practice for conditioning and developing basic skills in tumbling. Intermediate skills will be introduced during the latter half of the semester. Development of strength and flexibility is emphasized. One credit hour.

LESC 1123 Body Mechanics and Conditioning
Emphasis on self-improvement in fitness, conditioning, nutrition, strength development, weight loss or gain, efficient body mechanics, posture, and decreasing or increasing body measurements. One credit hour.

LESC 1124 Stretch/Stress Program
Emphasis is placed on a series of relaxing and effective stretches to help relieve tension, increase flexibility, and range of motion. The stress reduction section provides techniques to help relieve stress and tension. One credit hour.

LESC 1125 Lifetime Fitness
Emphasis is placed on developing an individual lifetime program to improve the health-related components of fitness and wellness. Practical application of principles of exercise and the science of nutrition will be major components in achieving and maintaining ideal body weight. One credit hour.

LESC 1126 Walking to Fitness
Prerequisite: LESC 1126 or equivalent. This course is designed to help individuals who are new to walking to develop a walking program that will increase their cardiovascular fitness. One credit hour.

LESC 1127 Intermediate Golf
Prerequisite: LESC 1127 or equivalent. Emphasis on the game of golf: rules, etiquette, selection of clubs, grip, stance, backswing, head position, follow-through, approach shots, full shots, and putting. Appropriate use of one, three, and five woods and two, three, five, seven, eight, and nine irons. Irons: short approach shots, high loft, distance shots; woods: driver and use on fairway; putting: playing from rough hillside lies and sand traps. A fee is charged. One credit hour.

LESC 1128 Weight Lifting/Training
An introduction to the fundamentals of weight lifting applicable to the development of muscular strength and endurance. Principles of exercise, body composition goals, lift techniques, safety instruction, and flexibility maintenance are emphasized. One credit hour.

LESC 1131 Aikido
Theory and practice of fundamentals of Aikido. Concentration will be on the development of skills, rules, regulations, and necessary equipment. One credit hour.

LESC 2103 Intermediate Ice Skating
Review of material in LESC 1103. New material includes: back crossover, T stop, back crossover in a figure eight pattern, fast forward crossover, three turns, and T take off; review of door carries, forced outside and inside edges, open Mohawk turn, one foot snow plow, hockey stop, spin, and bunny hop. One credit hour.

LESC 2105 Intermediate Swimming
Prerequisite: LESC 1105 or equivalent. Review of three basic strokes: front crawl, back crawl, and elementary backstroke. Coordinated stroking in side strokes, breaststroke, inverted breaststroke. Development of strong isolated arm strokes and leg kicks, safety and survival skills, simple diving, simple rescue skills, artificial respiration, and distance swimming. One credit hour.

LESC 2116 Intermediate Tennis
Prerequisite: LESC 1116 or equivalent. Review of rules and scoring, selection of racket, grip, footwork and body positioning, forehand, backhand, serve and volley strokes, and game strategy. Developing the approach shot, lob, and overhead, and strengthening the volley and serve. Analysis of singles and doubles play strategy. One credit hour.

LESC 2117 Intermediate Golf
Prerequisite: LESC 1117 or equivalent. Review of the game of golf: rules, etiquette, selection of clubs, grip, stance, backswing, head position, follow-through, approach shots, full shots, and putting. Appropriate use of one, three, and five woods and two, three, five, seven, eight, and nine irons. Irons: short approach shots, high loft, distance shots; woods: driver and use on fairway; putting: playing from rough hillside lies and sand traps. A fee is charged. Held off campus. One credit hour.

LESC 2117 Intermediate Bowling
Prerequisite: LESC 1119 or equivalent. Review of scoring rules, bowling etiquette, fundamentals, consistency, four-step approach, body position, aiming, back swing, release, follow-through, and rebound. Analysis of three-, four-, and five-step approaches, natural hook, severe hook, backup, and straight release; theories of aiming and principles of motion as they apply to bowling. A fee is charged. Held off campus. One credit hour.

LESC 2120 Intermediate Horseback Riding
Prerequisite: LESC 1120 or equivalent. Review and perfection of walk, trot, and canter, with emphasis on effective leads; effective use of rider’s body, hands, and legs. Introduction to barrel and cross-country course. A fee is charged. Held off campus. One credit hour.

LESC 2121 Fencing II Intermediate
An intermediate course designed to improve technical and tactical skills in the use of the foil. Intensive review of Fencing I, attacks on the blade, compound attacks, defense against compound attacks, tactics, defense, rules, and officiating; individual lessons, practice bouts, and class competition. One credit hour.

LESC 2122 Intermediate Gymnastics
Prerequisite: LESC 1122 or equivalent. Review of conditioning, basic skills in tumbling, and the vault. Free exercise routines, balance beam, and uneven bars for women; pommel horse, still rings, horizontal bar, and parallel bars for men. Introduction to composition of gymnastic routines. Strength and flexibility are emphasized. Students will perform required skills and routines and create routines. One credit hour.

LESC 2123 Body Mechanics II
Methods and techniques of developing strength, flexibility, and cardiovascular fitness using aerobic and self-improvement exercises. Conditioning will start slowly and progress to desirable levels of stress. One credit hour.

LESC 3103 Advanced Ice Skating
Review of material covered in LESC 2103. New material includes: squat and shoot-the-duck, review edges, layover step, layover return, spinning, forward pivots, two-foot spins, half Mapes jumps, outside forward rolls, and spirals. One credit hour.

LESC 3105 Advanced Swimming
Prerequisite: LESC 2105 or equivalent. Review of coordinated strokes, side strokes, breaststroke, butterfly, and inverted breaststroke. Continued development of isolated arm strokes and leg kicks, safety and survival skills, rescue skills, and artificial respiration. Emphasis on coordinated strokes for extended distances, trudgen and trudgen crawl, floating and survival skills, and free diving, underwater swimming and diving. One credit hour.

LESC 3106 Advanced Scuba Diving
Review of basic scuba techniques and safety procedures. Emphasis on water diving experience: safe diving procedures, limited visibility diving, light salvage and recovery diving, and deep and decompression diving. Advanced National Association of Underwater Instructors open water certification course. One credit hour.

LESC 3116 Advanced Tennis
Prerequisite: LESC 2116 or equivalent. Review of tennis fundamentals. Continued development of all strokes. Emphasis on development of serve, greater force and addition of spins, overhead smash, different types of lobs, different types of volleys, ground stroke, slice, and chop. Concentration on skill development in singles and doubles play and practice in tennis officiating. One credit hour.

LESC 3117 Advanced Golf
Prerequisite: LESC 2117 or equivalent. Review of golf fundamentals. Emphasis on development of approach shots, full shots with a club, and playing difficult lies, with concentration on improving putting skills. A fee is charged. Held off campus. One credit hour.

LESC 3119 Advanced Bowling
Prerequisite: LESC 2119 or equivalent. Review of bowling fundamentals. Emphasis on developing skill using a natural or severe hook. Concentration on body mechanics and principles of motion. A fee is charged. Held off campus. One credit hour.

LESC 3120 Advanced Horseback Riding
Prerequisite: LESC 2120 or equivalent. Emphasis on fine qualities of gaits; cause and solution to resistance problems; introduction to hunt seat; false and counter leads; cross-country and jumping tests; and understanding the health of the horse. A fee is charged. Held off campus. One credit hour.

LESC 4105 Lifeguard Training
Prerequisite: student must be able to swim 500 yards continuously. This is a course which will provide instruction of skills necessary for lifeguarding, CPR, and first aid training which will lead to Red Cross Lifeguard Certification. One credit hour.

LESC 4205 Water Safety Instructor
Prerequisites: LESC 4105, American National Red Cross water safety instructor’s certification. Methods and techniques of teaching swimming. Two hours lecture, two hours laboratory. Two credit hours.
INTEGRATED SCIENCE & MATHEMATICS

Acting Director: Leslie, Stephen A., professor

The College of Science and Mathematics offers a master of science degree in integrated science and mathematics. The program emphasizes the interdisciplinary character of science and mathematics, requiring students to complete up to 24 graduate credit hours of course work in a minimum of two areas: biology, chemistry, environmental health science, geology/earth science, health sciences, physics/astronomy, and mathematics. Either an additional 6 graduate credit hours of thesis or project, or an additional 12 hours of coursework are also required. Most of the courses for this degree reside in the specific disciplines. Specific options of earth science/physical science and earth science/biology articulate well with licensure requirements for middle and secondary teachers. Professionals in the industrial, environmental, forensics, and medical areas who are interested in advancing their academic credentials are encouraged to contact the dean of the College of Science and Mathematics for additional information.

Course in Integrated Science & Mathematics (IGSC)

IGSC 4401 Integrated Science Methods

Prerequisite: 16 credit hours of science courses. Lecture, laboratory, and field methods stress the learning of science as active, integrated, constructive processes involving experimentation, investigation, communication, reasoning, and problem solving as applied to life, earth, and physical systems. Dual-listed in the UALR Graduate Catalog as IGSC 5401. Three hours lecture and two hours laboratory per week.
DEPARTMENT OF MATHEMATICS & STATISTICS

The objectives of the department are to prepare students to enter graduate school, to teach at the elementary and secondary levels, to understand and use mathematics in other fields of knowledge with basic mathematical skills for everyday living, and to be employed and to act in a consulting capacity on matters concerning mathematics.

The department offers degrees in mathematics (bachelor of science and bachelor of arts) and secondary teacher licensure in mathematics (bachelor of science and bachelor of arts). The department also offers minors in mathematics and statistics.

Admission Requirements

To be admitted into the mathematics program a student must have a cumulative grade point average of 2.50 or greater and must have passed MATH 1302 and MATH 1303 or their equivalents with a grade of C or greater or have established proficiency by a placement exam or an equivalent method. Decisions regarding equivalency of courses and situations in which students have tested out of courses will be made by the department chairperson.

Scholarships and Awards

The Department of Mathematics and Statistics awards three scholarships:

- The DeWoody and Emily Dickinson Math Scholarship is awarded to a full- or part-time mathematics major in his/her sophomore or junior year. In selecting a recipient for the Dickinson Scholarship, academic accomplishments are given the highest consideration, with additional consideration given to financial need, leadership skills, and involvement with student/math activities.

- The Ma Endowed Family Scholarship is awarded to a full- or part-time student majoring in Mathematics. Academic accomplishment and financial need are strongly considered when selecting a recipient.

- The Linda and Tom McMillan Mathematics Award is awarded to a full- or part-time student majoring in mathematics. Preferences are given to juniors and seniors, and academic accomplishment and financial need are strongly considered.

The Department of Mathematics and Statistics annually confers the following awards:

- Outstanding Undergraduate Student
- Outstanding Graduate Student
- Outstanding Graduating Senior
- Outstanding Achievement by Undergraduate Student
- Outstanding Achievement by a Graduate Student
- Outstanding Teaching by a Graduate Student
- Outstanding Service Award
- Outstanding Tutor Award

Honors Program in Mathematics

The department offers an honors program to permit exceptional students to pursue advanced study and receive recognition for its completion. The honors program is distinct from graduation with honors and does not replace it.

Participants in the honors program must be mathematics majors with at least junior standing (60-90 credit hours). The students will be selected by a faculty committee, normally during the junior year and usually before the second semester. Minimum admission requirements are a 3.25 grade point average overall and a 3.25 grade point average in all mathematics and statistics courses. These averages must be maintained for continued participation in the program. There will be at most five students in the program at one time. For details about the program please contact the department office.

Developmental Mathematics

The department offers the developmental mathematics courses MATH 0300 Elementary Algebra and MATH 0301 Intermediate Algebra. Both courses are scheduled each term. A student is not permitted to enroll in any developmental course more than two times. For information on alternative methods of receiving credit for a developmental mathematics course, students should contact the department chair.

Mathematics Placement Tests

Note: Enrollment in a course before completion of prerequisites will result in administrative withdrawal from that course. Students may place into the following mathematics courses with appropriate scores on mathematics placement tests:

MATH 0301 Intermediate Algebra

- Enhanced mathematics ACT score of 17 or ACT Elementary Algebra subscore of 9.
- Mathematics SAT score of 460.
- Elementary Algebra Score of 109 or greater.¹
- A score of 73 on the departmental test over MATH 0300 Elementary Algebra.

MATH 1302 College Algebra or MATH 1315 College Mathematics

- Enhanced mathematics ACT score of 19 or ACT Elementary Algebra subscore of 10.
- Mathematics SAT score of 510.
- Meet prerequisites for MATH 0301 and score of 63 on the College Level Mathematics Test.²

MATH 1303 Trigonometry, MATH 1342 Business Calculus or MATH 1311 Applied Calculus I

- Score of 53 on the CLEP over Mathematics 1302 College Algebra.
- Meet prerequisites for Mathematics 1302 and score of 86 on the College Level Mathematics Test.

MATH 1451 Calculus I

- Meet prerequisites for MATH 1302 or MATH 1303 and score of 103 on the College Level Mathematics Test.

¹. Except for transient students and students with a prior baccalaureate degree.
². The Mathematics Placement Tests, given by Testing Services, may be used instead of ACT or SAT test scores if standardized test scores are not required because the student is a transfer student. The Mathematics Placement Tests may also be used by students if ACT or SAT test scores are more than five years old.
MATH 1452 Calculus II
- A grade of 2 or greater on the AP Calculus AB Test.

MATH 1312 Applied Calculus II
- A grade of C or greater in MATH 1311 and a score of 103 on the College Level Mathematics Test.

Requirements for other courses may be obtained from the Department of Mathematics and Statistics. Credit by examination may be obtained for MATH 0300, 0301, 1302, 1303, 1451, 1452, 1315, and 1342. Call the Office of Testing Services and Student Life Research at (501) 569-3198 for details.

Major in Mathematics
Bachelor of Science
The bachelor of science degree is designed for students who plan to enter graduate school or who wish immediate employment as mathematicians. It requires MATH 1223, 2453, 2310, 3310, 3312, 3321, 3322, 3350, 4302; STAT 3352; six additional hours of upper-level mathematics or statistics electives to include either MATH 4310 or 4302. Six hours of German or French are strongly recommended for students who intend to obtain the PhD degree in mathematics.

Bachelor of Arts
The bachelor of arts degree requires MATH 1223, 2453, 2310, 3310, 3312, 3322, 4390, STAT 3352, and 12 hours of upper-level mathematics or statistics electives. Also, students seeking the bachelor of arts degree are required to complete a 2000-level second language course or demonstrate equivalent proficiency as measured by a competency test.

Secondary Teacher Licensure
Students wishing to teach mathematics at the secondary level must complete either a bachelor of science or a bachelor of arts in mathematics.

The bachelor of science degree within the secondary teacher licensure option consists of MATH 1223, 2453, 2310, 3310, 3312, 3322, 3330, 4381, 4383, 4303, 4304, 4390, and either 4310 or 4302; STAT 3352; and the minor in secondary education. See “Secondary Teacher Licensure” on page 45 for details.

The bachelor of arts in mathematics within the secondary teacher licensure option consists of MATH 1223, 2453, 2310, 3310, 3312, 3322, 3330, 4381, 4383, 4390; STAT 3352; nine hours of upper-level MATH or STAT electives; and a minor in secondary education. See “Secondary Teacher Licensure” on page 45 for details.

Minor in Mathematics
The minor requires MATH 1451, 1452, 2453, 2310, and six hours of upper-level mathematics.

Minor in Statistics
The minor in statistics is designed for students who wish to apply their mathematical training in any of the many fields that employ statistics. It requires at least 12 hours of statistics courses, including STAT 3350, 3352, 3353, and either STAT 3351 or 4352. MATH 1223, 1451, and 1452 are also required. Statistics courses, except 3352, used for a minor may not be used to satisfy requirements for a major in mathematics.

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BS and BA Recommended Curriculum

**Freshman Year (30 hours)**
- MATH 1302 College Algebra
- MATH 1451 Calculus I
- MATH 1303 Trigonometry
- MATH 1223 Introduction to Mathematics Software
- HIST 1311 History of Civilization I
- HIST 1312 History of Civilization II
- RHET 1311 Composition I
- RHET 1312 Composition II
- SPCH 1300 Speech Communication
- HIST 2311 U.S. History to 1877, or HIST 2312 U.S. History since 1877, or POLS 1310 American National Government

**Sophomore Year (33 hours)**
- MATH 1452 Calculus II
- MATH 2453 Calculus III
- MATH 2310 Discrete Mathematics
- ENGL 2337 World Literature, or ENGL 2338 World Literature Themes, or PHIL 2320 Ethics and Society
- ARHA 2200 Introduction to Visual Art, or MUHL 2200 Introduction to Music, or DRTH 2200 Introduction to Theatre and Dance (6 hours)

**Social science core requirements (3 hours)**

**Sciences core requirement (8 hours)**
- Minor (6 hours)

**Junior Year (27 hours)**
- MATH 3322 Introduction to Differential Equations
- MATH 3312 Linear Algebra
- MATH 3310 Algebraic Structures I
- MATH 3352 Applied Statistics I
- Upper-level Mathematics or Statistics course (3 hours)
- Social science core requirements (3 hours)
- Minor (9 hours)

**Senior Year - B.S. Degree (28 hours)**
- MATH 4390 Senior Seminar
- MATH 4303 Advanced Calculus I
- MATH 4304 Advanced Calculus II
- MATH 4302 Complex Analysis
- MATH 4310 Algebraic Structures II
- Upper-level minor courses (6 hours)
- Upper-level electives (12 hours)

**Senior Year - B.A. Degree (28 hours)**
- MATH 4390 Senior Seminar
- Upper-level Mathematics or Statistics course (9 hours)
- Upper-level Minor courses (6 hours)
- Upper-level Electives (12 hours)
Courses in Statistics (STAT)

STAT 2350 Introduction to Statistical Methods
Prerequisite: MATH 1302 or 1315 or equivalent. Introduction to the fundamental ideas of statistics, including descriptive statistics, normal distributions, sampling experiments, tests of hypotheses, and elementary probability. This course cannot be applied as upper-level credit toward a major in mathematics. Three hours lecture. Three credit hours.

STAT 3350 Introduction to Probability
Prerequisite: a grade of C or greater in MATH 1452. Combinatorial theory, random variables, continuous and discrete distributions, expected value, jointly distributed random variables, conditional expectation, law of large numbers, central limit theorem. Three hours lecture. Three credit hours.

STAT 3351 Statistical Inference
Prerequisite: a grade of C or greater in STAT 3350. Point estimation, interval estimation, tests of statistical hypotheses, distribution free methods, regression, order statistics. Three hours lecture. Three credit hours.

STAT 3352 Applied Statistics I
Prerequisite: a grade of C or greater in either MATH 1452, 1342, or 1312. Measures of central tendency, variation, probability distributions, sampling distributions, tests of hypotheses, confidence intervals. Three hours lecture. Three credit hours.

STAT 3353 Applied Statistics II
Prerequisites: a grade of C or greater in STAT 3352, knowledge of a scientific programming language. Analysis of variance, factorial experiments, unequal subclasses, multiple regression and correlation, analysis of covariance, uses of chi-square tests, tests of independence, goodness of fit. Three hours lecture. Three credit hours.

STAT 4352 Distribution-Free Statistical Methods
Prerequisite: a grade of C or greater in STAT 3352 or its equivalent. Comparison of classical and distribution-free tests of hypotheses, test assumptions, efficiency and related characteristics, Fisher’s method of randomization, ranking tests, tests based on the binomial distribution. Three hours lecture. Three credit hours.

STAT 4354 Design and Analysis of Experiments
Prerequisite: STAT 3351. Factorial experiments, randomized block designs, Latin squares, Graeco-Latin squares, analysis of covariance, incomplete block designs, distribution-free methods. Three hours lecture. Three credit hours.

Courses in Mathematics (MATH)

MATH 0300 Elementary Algebra
Basic arithmetic, signed numbers, variables, polynomials, exponents, linear equations in one variable, special formulas, factoring second degree polynomials, graphing equations in two variables, roots and radicals, ratios, proportions, and variation. Note: MATH 0300 will not count for credit toward a degree for any student. Grading for this course will be A, B, C, no credit. Three hours lecture. Three credit hours.

MATH 0301 Intermediate Algebra
Prerequisite: a grade of C or greater in MATH 0300, its equivalent, or suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Fundamental operations with real numbers; linear and quadratic equations; systems of linear equations; inequalities; graphs, logarithms, fractional and negative exponents. Note: MATH 0301 will not count for credit toward a degree for any student. Grading for this course will be A, B, C, no credit. Three hours lecture. Three credit hours.

MATH 1223 Introduction to Mathematics Software
Prerequisites: grades of C or greater in MATH 1302 and 1303, equivalent transfer courses, or a suitable score on a mathematics placement test. Symbolic and numerical manipulations in a Computer Algebra System (CAS); graphing; simple programming; spreadsheet fundamentals and mathematical typesetting. Four hours lab. Two credit hours.

MATH 1302 College Algebra
Prerequisite: a grade of C or greater in MATH 0301, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Relations, functions, graphing, systems of linear equations and inequalities, matrices and determinants, roots of polynomials, logarithmic and exponential functions, sequences, series, mathematical induction and the binomial theorem. Three hours lecture. Three credit hours.

MATH 1303 Trigonometry
Prerequisite: a grade of C or greater in MATH 1302, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Functions, analytic geometry, formulas and variation; set theory; logic; probability and statistics, combinatorics, populations, samples, normal distribution, mean, variance, and standard deviation. Note: This course satisfies the state mandated requirement for the baccalaureate degree. Three credit hours.

MATH 1342 Business Calculus
Prerequisite: a grade of C or greater in MATH 1302, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Differential and integral calculus with applications to economics and business. Three hours lecture. Three credit hours.

MATH 1451 Calculus I
Prerequisites: grades of C or greater in MATH 1302 and 1303, equivalent transfer courses, or a suitable score on a mathematics placement test. Limits and limit theorems, continuity, derivatives and the chain rule, implicit differentiation, applications, the definite integral, the Fundamental Theorems of Calculus, and applications of integration. Three hours lecture. Two hours lab. Four credit hours.

MATH 1452 Calculus II
Prerequisite: a grade of C or greater in MATH 1451 or an equivalent transfer course. Integration, the definite and indefinite integrals, L’Hospital’s rule, improper integrals, Taylor polynomials, infinite series, power series, polar coordinates, and conic sections. Three lecture hours and two lab hours. Four credit hours.

MATH 2310 Discrete Mathematics
Prerequisite: a grade of C or greater in MATH 1302. Emphasizes applications of mathematics in computer science and other areas of modern technology. The topics include mathematical reasoning, set theory, proofs by induction, number systems, relations, directed graphs, trees, and related topics of study. Three hours lecture. Three credit hours.

MATH 2453 Calculus III
Prerequisite: a grade of C or greater in MATH 1452 or equivalent transfer course. Three-dimensional analytic geometry, vectors, lines, planes, partial derivatives, multiple integrals, line integrals, and gradient fields. Three lecture hours and two lab hours. Four credit hours.

MATH 3301 Introduction to Topology
Prerequisites: grades of C or greater in MATH 2453, 3312. Topological spaces, metric spaces, sequences, compact and connected sets, continuous functions. Three hours lecture. Three credit hours.

MATH 3310 Algebraic Structures I
Prerequisite: MATH 2310. An introduction to modern algebraic structures. The topics include equivalence relations, groups, isomorphisms, direct products, rings, fields, and integral domains. Three credit hours.

MATH 3311 Number Theory
Prerequisite: a grade of C or greater in MATH 1302. Basic representation, the fundamental theorem of arithmetic, combinatorial and computational number theory, fundamentals of congruences, solving congruences, arithmetic functions, primitive roots, prime numbers, quadratic congruences, additivity. Three hours lecture. Three credit hours.
MATH 3312 Linear Algebra
Prerequisites: grades of C or greater in MATH 1342 or 1312 or 1452; and 2310. Vector spaces, bases, polynomials, Cayley-Hamilton Theorem, invariant subspaces, linear transformations, eigenvalues and eigenvectors, selected applications, Jordan canonical form. Three hours lecture. Three credit hours.

MATH 3322 Introduction to Differential Equations
Prerequisite: a grade of C or greater in MATH 1452 (may be corequisite with consent of instructor). Methods of forming and solving some important types of ordinary differential equations and their application to selected physical and biological models. Three hours lecture. Three credit hours.

MATH 3324 Mathematical Models
Prerequisites: grades of C or greater in MATH 2453, 3312, STAT 3350. A study of selected topics from the physical and biological sciences demonstrating the interaction between model building and mathematical systems. Three hours lecture. Three credit hours.

MATH 3325 Mathematics of Optimization
Prerequisites: grades of C or greater in MATH 2453, 3312, STAT 3350. Linear programming, Simplex and revised simplex algorithms. Transportation problems, networks and flows, games and decisions. Three hours lecture. Three credit hours.

MATH 3330 College Geometry I
Prerequisite: a grade of C or greater in MATH 1304. A survey of secondary school geometry, the axiomatic method; Euclidean geometry; an introduction to non-Euclidean geometry. Three hours lecture. Three credit hours.

MATH 4100, 4200, 4300 Independent Study
Prerequisites: consent of department chairperson and supervising faculty member. Studies of assigned topics chosen to develop investigative, analytical, research, or professional skills related to mathematics, culminating in a written paper. Three hours lecture. One, two, or three credit hours.

MATH 4301 Analysis I
Prerequisites: grades of C or greater in MATH 2453 and 3312. Real number system, Euclidean n-space, complex numbers, topology of real and complex Euclidean spaces, continuous functions, pointwise and uniform convergence, power series, the derivative, and the integral. Dual-listed in the UALR Graduate Catalog as MATH 5301. Three hours lecture. Three credit hours.

MATH 4302 Complex Analysis
Prerequisite: a grade of C or greater in MATH 4303 or consent of instructor. Algebra of complex numbers, analytic functions, integration, power series, Laurent series, and elementary conformal mappings. Dual-listed in the UALR Graduate Catalog as MATH 5302. Three hours lecture. Three credit hours.

MATH 4303 Advanced Calculus I
Prerequisites: grades of C or greater in MATH 2453 and 3312. The real number system, sequences, limits, continuity, metric spaces, convexity, derivatives, linear analysis, and integration. Dual-listed in the UALR Graduate Catalog as MATH 5303. Three credit hours.

MATH 4304 Advanced Calculus II
Prerequisite: a grade of C or greater in MATH 4303. Functions of several variables, implicit function theorem, geometry of curves and surfaces, differential forms, Stoke’s theorem and Green’s theorem. Dual-listed in the UALR Graduate Catalog as MATH 5304. Three hours lecture. Three credit hours.

MATH 4308 Integral Transform Theory
Prerequisite: a grade of C or greater in MATH 3322. Review of linear differential equations. The Laplace transform, functions of a complex variable, integration by the method of residues, the Laplace transform inversion integral. The Z- transform, the Z-transform inversion integral, difference equations, Fourier series, and the Fourier transform. Dual-listed in the UALR Graduate Catalog as MATH 5308. Three credit hours.

MATH 4310 Algebraic Structures II
Prerequisite: a grade of C or greater in MATH 3310. Continues the topics of Algebraic Structures I into more advanced topics of modern algebra including factor groups, polynomial rings, quotient rings, and extension fields. Three credit hours.

MATH 4323 Numerical Analysis
Prerequisites: grades of C or greater in MATH 2453, 3312, or equivalent courses; knowledge of a scientific programming language. Error analysis, fixed points and roots, interpolation, approximations, numerical differentiation and integration, linear systems, differential equations. Dual-listed in the UALR Graduate Catalog as MATH 5323. Three hours lecture. Three credit hours.

MATH 4331 College Geometry II
Prerequisite: a grade of C or greater in MATH 3330. A rigorous development of Euclidean geometry. Three hours lecture. Three credit hours.

MATH 4361 History of Mathematics I
Prerequisite: grade of C or greater in MATH 1452. This course will provide an overview of aspects of the history of mathematics from the Early Beginnings (before the sixth century B.C.), Classical Period (sixth century B.C. to fifth century), and Medieval and Renaissance Periods (sixth century to sixteenth century). This survey course discusses a broad range of the history of mathematics, including a variety of topics over many consecutive time periods, and is organized so that there is more discussion than lecture. The course will consider both the growth of mathematical ideas and the context in which these ideas developed, in various civilizations around the world. Attention will be paid to how the history of mathematics or mathematical ideas is important in the teaching of these ideas in both secondary school and college. Three credit hours.

MATH 4362 History of Mathematics II
Prerequisite: grade of C or greater in MATH 1452. This course will provide an overview of aspects of the history of mathematics from the Early Modern Period (seventeenth and eighteenth centuries) and the Modern Period (nineteenth and twentieth centuries). This survey course discusses a broad range of the history of mathematics including a variety of topics over many consecutive time periods, and is organized so that there is more discussion than lecture. The course will consider both the growth of mathematical ideas and the context in which these ideas developed in various civilizations around the world. Attention will be paid to how the history of mathematics or mathematical ideas is important in the teaching of these ideas in both secondary school and college. Three credit hours.

MATH 4390 Senior Seminar
Prerequisites: senior standing and major status in the Department of Mathematics and Statistics. Students in the course prepare and present senior projects and portfolios, prepare and take Major Field Assessment Test in mathematics, pick, solve, and submit the solution of a problem from the problem sections of professional journals. This seminar is offered in the fall semester only and is to be taken by mathematics majors planning to graduate in the fall or the following spring. Three credit hours.

MATH 4199-4399 Selected Topics
Prerequisite: consent of instructor. The content of this course changes on demand. For descriptive title of the content refer to the semester schedule. Dual-listed in the UALR Graduate Catalog at the 5000-level. One hour lecture for each hour credit. One, two, or three credit hours.

MATH 3382 Mathematics II for Early Childhood
Prerequisites: admission to the early childhood education program and successful completion (C or greater) of MATH 3380. Second mathematics education course for early childhood education majors (no emphasis in mathematics). Problem-solving, estimation, number sense, development of computational algorithms, mental computation techniques, measurement of two- and three-dimensional objects, geometry, probability, data collection and analysis, technology, proportional reasoning, and historical developments in mathematics. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 3383 Mathematics for Middle School
Prerequisites: admission to the middle childhood education program (mathematics/science specialty) and a grade of C or greater in MATH 3302. First mathematics course specifically for middle childhood education (mathematics/science specialty) majors. Problem solving; sets; number systems including whole numbers, integers, rational numbers, and real numbers; number theory; algebra; geometry; matrices; probability; statistics; technology; and historical developments in mathematics. The course includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.
MATH 3384 Concepts in Geometry
Prerequisites: admission to the middle childhood education program and a grade of C or greater in MATH 3383 or MATH 3380. Problem solving, logic and sets, proofs, geometry as an axiomatic system, geometric figures in two and three dimensions, systems of measurement, congruence and similarity, geometry using coordinates, geometry using transformations, proportional reasoning, modeling real-world situations using geometry, networks, technology, and historical developments in geometry. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 4380 Concepts in Probability and Statistics
Prerequisites: admission to the middle childhood education program and a grade of C or greater in MATH 3380 or MATH 3383. Problem solving, organizing data, averages and variation, regression and correlation, probability theory, normal distributions, sampling distributions, estimation, hypothesis testing involving one population, inferences about differences, proportional reasoning, technology, and historical developments in probability and statistics. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis throughout the course is on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 4381 Teaching Mathematics in Secondary School
Prerequisite: admission to the secondary education minor program or consent of the instructor. An overview of methods and materials used to teach secondary mathematics, techniques considered most effective, and appropriate assessment strategies. A link between mathematics content/skills and practical applications for classroom instruction. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis throughout on problem solving, reasoning, communication, and connections. Required for secondary mathematics teacher licensure. Two hours lecture and two hours laboratory. Three credit hours. Spring semester offering

MATH 4383 Technology in Math Education
Prerequisite: admission to the secondary education minor program, MATH 2453 and at least 12 upper-level hours in mathematics, or consent of instructor. Applications of technology in the secondary mathematics classroom. An overview of mathematics software appropriate for the secondary mathematics classroom. Emphasis throughout on problem solving, reasoning, communication, and connections. Required for secondary mathematics teacher licensure. Two hours lecture and two hours laboratory. Three credit hours. Fall semester offering.
DEPARTMENT OF NURSING

ETAS 405
569-8081
371-7546 (fax)
Chairperson:
Schlumberger, Ann B.,
Professor

Professors:
Rimer, Linda J.
Womack, Brenda A.

Associate Professors:
Gilbert, Cynthia K.
Perkins, Gail B.
Strickland, Lana D.

Assistant Professors:
Baker, Barbara
Fruetling, Sara K.
O’Neal, Patricia
Porter, Kimberly B.
Ragsdale, S. Patricia
Rurup, Debra
Scott, Joyce Grant
Tolliver, Seth
Watson, Julie

Instructors:
Molsbee, Preston

Associate Degree Program

The department offers an associate of science degree program in nursing. A four-semester traditional and accelerated option is available for those students seeking initial licensure. A three-semester transition (fast-track) option is available for LPN/LPTNs, and qualified paramedics. Both options offer the knowledge, skills, and attitudes essential to the competent nurse and are taught in settings ranging from the classroom, campus skills laboratories to major area hospitals, outpatient facilities, and other health care facilities. The graduate is prepared to enter professional practice in settings such as hospitals, nursing homes, physicians’ offices, and community settings. For more information, visit the Department of Nursing web site at http://www.uarl.edu/nursing/.

The associate of science degree program is approved by the Arkansas State Board of Nursing and accredited by the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway, New York, New York 10006; (212) 363-5555. Upon completion of the curriculum, the graduate is eligible to apply to take the National Council Licensing Examination for Registered Nurses. Information regarding the comparison of nursing programs (tuition, fees, and length of programs) may be obtained from NLNAC.

Students who are considering a career in nursing should be aware that no application for initial Registered Nurse (RN) licensure will be considered by the Arkansas State Board of Nursing without state and federal criminal background checks by the Arkansas State Police and the Federal Bureau of Investigation. The Arkansas State Board of Nursing shall refuse to issue the RN license to any person who is found guilty of or pleads guilty or nolo contendere to any offense listed in Act 1208 of 1999, for details refer to the Arkansas Nurse Practice Act Sub-Chapter on Licensing. Persons requesting initial licensure may request a waiver from the Arkansas State Board of Nursing. Clinical agencies used for nursing laboratory may require criminal background checks, checked drug screening, and/or random drug screens for nursing students. Results of agency screening may prohibit participation in clinical. Nursing students prohibited from participation in laboratory at a clinical agency will not be permitted to maintain enrollment in the nursing program.

Associate of Science in Nursing

Traditional Option

The course of study includes 31 credit hours in liberal arts and sciences and 39 credit hours in nursing. The traditional option requires four semesters commencing in the fall. The traditional option is fall, spring, fall, spring; an Accelerated Traditional Option is offered fall, spring, summer, fall.

Associate of Science in Nursing

Transition Option (for LPN/LPTNs and qualified paramedics only)

The course of study includes 31 credit hours in liberal arts and sciences and 39 credit hours in nursing. Transition option students enroll in NURS 1315 Nursing Role Transition, which prepares them for their roles as registered nurses (RN). Upon completion of the program, students are awarded an additional 9 credit hours in nursing for NURS 1100 and 1805.

Students enter in May and complete the program the following May. NURS 1315 is offered only during the summer semester and enrollment is limited to transition option students.

Minor in Nursing

A minor in nursing requires completion of all nursing courses and nursing curriculum support courses that are necessary for the associate degree in nursing. Students may not declare a minor in nursing unless they have been admitted to the nursing program.

Transfer Students

Students previously enrolled in another nursing program must forward a letter requesting transfer and attach copies of all college transcripts. Letters and transcripts should be sent to the department chairperson. Students who are requesting transferring from another nursing program are also required to provide a letter of eligibility to reenter their previous nursing program in order to be eligible for consideration for entry into the UALR nursing program. If a student has failed a nursing course the request for transfer is classified as an academic reentry request and reentry policies apply. If a student has failed more than one nursing course they are not eligible for consideration for entry into the UALR nursing program.

Transfer equivalency information for nursing curriculum support courses is available on the UALR website. It is the responsibility of transfer students to confirm that transfer courses are equivalent to required nursing curriculum support courses.

Equivalencies and Credit by Examination

UALR offers credit by examination with some restrictions for courses. See “” on page 31. Credit by examination for NURS 1805 and NURS 1100 is available to qualified paramedics and to diploma program transfers. One year of the diploma program must be successfully completed for consideration for transfer to the second semester of the UALR program. Information about credit by examination in nursing courses is available from the Department of Nursing.

Traditional Option

Application Requirements

The student must:
1. Be admitted to UALR with regular or conditional admission status and maintain a 2.0 GPA at UALR. Transfer students currently enrolled in other universities at the time of application will be considered for admission into the nursing program if the following documents are on file in the UALR Office of Admissions and Financial Aid by January 15:
   • Completed UALR application form
   • Valid ACT or SAT scores, completed high school transcript or GED scores, and college transcripts through the previous fall semester
   • Required immunization records.
2. Obtain application advising from the Department of Nursing prior to submitting an application.
3. Have successfully completed or be eligible to enroll in MATH 1315 or 1302 and in RHET 1311 or their equivalents. All developmental courses must be completed.
4. Have successfully completed 4 credit hours of Anatomy and Physiology, either BIOL 1411 Introduction to Human Anatomy and Physiology I, BIOL 1412 Introduction to Human Anatomy and Physiology II, or equivalent. A three hour course will not meet this requirement.
5. Have a minimum GPA of 2.60 in nursing curriculum support courses (detailed below) and a cumulative UALR GPA of 2.00 or greater.
6. Submit a completed Department of Nursing Application Form between January 15 and February 28 (enclose a copy of all college transcripts and scores for credit by examination in nursing curriculum support courses).

**Transition Option (for LPN/LPTNs and qualified paramedics)**

Students interested in this option should schedule an advising appointment with the Department of Nursing transition advisors. Applications are accepted between January 15 and February 28.

**Transition Option Application Requirements**

**LPN s/LPTNs must:**
1. Be a graduate of a state board of nursing approved LPN or LPTN program.
2. Have a current, unencumbered LPN or LPTN license in the State of Arkansas or a mutual recognition licensure recognized by the Arkansas State Board of Nursing Nurse License Compact.
3. Meet advanced placement testing and work experience requirements:
   a. Less than 12 months after LPN/LPTN graduation: No testing required for admission to Transition option
   b. Greater than 12 months after LPN/LPTN graduation: No testing required if during past 12 to 24 months have had at least 1000 hours of nursing employment. Employment verification letters must be provided with the application.
4. Students who require advanced placement testing must successfully pass the Excelsior Fundamentals of Nursing Examination.

**Paramedics must:**
1. Be a graduate of a paramedic program affiliated with an accredited college or university.
2. Currently hold certification from the Arkansas Department of Health as an Arkansas Paramedic and be currently registered as a paramedic with the National Registry of EMTs.
3. Successfully pass the Excelsior Fundamentals of Nursing Examination.
4. Submit employment verification letters with the application.

Both LPNs/LPTNs and Paramedics must:
1. Be admitted to UALR with regular or conditional admission status and maintain a minimum GPA of 2.0 at UALR. Transfer students currently enrolled in other universities at the time of application will be considered for admission into the nursing program if the following documents are on file in the UALR Office of Admissions and Financial Aid by January 15:
   - Completed UALR application form
   - Valid ACT or SAT scores, completed high school transcript or GED scores, and college transcripts through the previous fall semester
   - Required immunization records.
2. Obtain application advising from the Department of Nursing prior to submitting an application.
3. Complete the NURS 1315 prerequisite courses or course equivalents with a grade of C or greater, (See NURS 1315 course description in the section that follows).
4. Have a minimum GPA of 2.60 on all nursing curriculum support courses completed at the time the application is made.
5. Submit a completed Department of Nursing Application form. Applications must be received in the nursing office between January 15 and February 28.
6. Submit copies of all college transcripts, LPN/LPTN or paramedic transcripts, and proof of current licensure or certification with the application.

**Traditional Option Course Requirements**

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<thead>
<tr>
<th>Nursing Curriculum Support Courses</th>
<th>CHEM 1400 Fundamental Chemistry I</th>
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<tbody>
<tr>
<td>RHET 1311 Composition I</td>
<td>Required Nursing Courses (39 hours)</td>
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<tr>
<td>RHET 1312 Composition II</td>
<td>NURS 1805 Adult Nursing I</td>
</tr>
<tr>
<td>MATH 1302 College Algebra</td>
<td>NURS 1100 Introduction to Nursing</td>
</tr>
<tr>
<td>or MATH 1315 College Mathematics</td>
<td>NURS 1510 Adult Nursing II</td>
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<tr>
<td>PSYC 2300 Psychology and the Human Experience</td>
<td>NURS 1520 Mental Health Nursing</td>
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<tr>
<td>or SOCI 2300 Introduction to Sociology</td>
<td>NURS 2510 Obstetric Nursing</td>
</tr>
<tr>
<td>BIOL 1411 Introduction to Human Anatomy and Physiology I</td>
<td>NURS 2520 Pediatric Nursing</td>
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<td>BIOL 1412 Introduction to Human Anatomy and Physiology II</td>
<td>NURS 2910 Adult Nursing III</td>
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<tr>
<td>BIOL 2401 Microbiology</td>
<td>NURS 2130 The Nurse's Professional Role</td>
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<tr>
<td>HIST 2311 U.S. History to 1877</td>
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<tr>
<td>or HIST 2312 U.S. History since 1877</td>
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<td>or POLS 1310 American National Government</td>
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**Transition Option Course Requirements**

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<td>BIOL 1412 Introduction to Human Anatomy and Physiology II</td>
<td>Two hour NURS elective</td>
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<td>BIOL 2401 Microbiology</td>
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<tr>
<td>or POLS 1310 American National Government</td>
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</tbody>
</table>
Admission Selection Process (both options)
Students who meet application requirements will be selected for entry into the nursing program based on total quality points in nursing curriculum support courses completed at the time of application. Points for repeated nursing curriculum support courses are deducted from the final quality point total. Refer to the application brochure or the on-line web-site for additional information. The order of admission into the program is as follows:
1. Students are initially ranked by total quality points.
2. If more than one student has the same number of quality points, these students are ranked by grade point average (GPA) in the nursing curriculum support courses.
3. If more than one student has the same number of total quality points and the same grade point average in nursing curriculum support courses, students will be randomly ranked.

Additional information on quality point calculation may be obtained on the Department of Nursing web site at http://www.uarl.edu/nursing/.

Qualificd applicants who are not initially selected or who submit an application after February 28th will be placed on a waiting list. Placement on the waiting list is in order of the applicant’s total quality points. Quality points and nursing curriculum support course grade point average are recalculated after the spring and summer semesters and waiting list ranking are adjusted as indicated. Spaces that become available prior to the beginning of the semester will be filled from the waiting list. The waiting list will not carry over to the next year; students not selected for admission must reapply each year.

Program Progression (both options)
Completion of the associate of science degree in nursing requires a minimum grade of C in all nursing courses and nursing support courses. Progression in the nursing sequence requires a minimum grade of C in all the nursing courses and their prerequisites/co-requisites. A minimum UALR cumulative grade point average of at least 2.0 on all work attempted at the University must be maintained.

First year students must complete the assessment testing requirements by the designated date in order to progress into NURS 2510/2520. A passing score on the assessment exit examination is required for successful completion of NURS 2910. Specific testing policies are located in the UALR Department of Nursing Student Handbook.

Graduation Requirements (both options)
- Minimum UALR GPA of 2.0.
- Grade of C or greater in all nursing curriculum support courses.
- Grade of C or greater in all required nursing courses.
- Successful completion of assessment exit examination.

Courses in Nursing (NURS)

NURS 1100 Introduction to Nursing
Corequisite: NURS 1805. An introduction for nursing students to concepts basic to the practice of nursing, historical events influencing nursing; roles of the associate degree nurse and the nursing student; the communication process; patient teaching; medical and nursing terminology; documentation; and basic legal/ethical issues. Web-enhanced. One credit hour.

NURS 1301 Medical Terminology for Nursing
An elective, web-based course designed to provide nursing students with an understanding of medical terminology; provides the framework for understanding medical records by presenting terms, abbreviations, symbols, forms and formats commonly used by healthcare providers. Three credit hours.

NURS 1315 Nursing Role Transition
Prerequisites: BIOL 1411, 1412; MATH 1315 or 1302; PSYC 2300 or Sociology 2300; RHET 1311, 1312; and one of the following: HIST 2311, 2312, or POLI 2301; CHEM 1400, or a higher level; BIOL 2401 or equivalents. Prepares LPNs, LPTNs, and paramedics to begin the transition into the role of the RN. Emphasis is on the three roles of the associate degree nurse, the application of critical thinking and the nursing process, professional role transition, the use of effective therapeutic communication, and verification of mastery of basic medical-surgical knowledge/skills confirmed through completion of self-paced modules. Fifteen hours lecture per week for three weeks. Web-enhanced. Three credit hours.

NURS 1510 Adult Nursing I
Prerequisites: NURS 1100, 1805, BIOL 1411, 1412. Designed to prepare the student to provide acute care to middle-aged adults with common unmet needs through a variety of clinical laboratory experiences in selected health settings. Students will use the role of the nurse in a variety of health care settings under faculty supervision. Four hours lecture, 12 hours laboratory per week for one-half semester. Five credit hours.

NURS 1520 Mental Health Nursing
Prerequisites: NURS 1100, 1805, BIOL 1411, 1412. Prerequisite for Transition LPNs: NURS 1315. A study of individuals of all ages in all stages of growth and development with psychosocial alterations. Students will use the nursing process while providing care for patients experiencing crises and a variety of mental disorders. Selected health and/or community experiences are under faculty supervision. Traditional option - four hours lecture, 12 hours laboratory per week for one-half semester. Transition option - six hours lecture, 18 hours laboratory per week for five weeks. Five credit hours.

NURS 1805 Adult Nursing I
Prerequisites or corequisites: NURS 1100, BIOL 1412. Designed to prepare the student to meet common, unmet needs of patients. Provides interaction with and patient care for older patients through a variety of clinical laboratory experiences in selected health settings. Students will use the nursing process decision-making framework at a beginning level in a structured setting under close supervision of faculty while providing patient care. Provides a foundation for more advanced study. Four hours lecture, eight hours laboratory per week. Eight credit hours.

NURS 2130 The Nurse’s Professional Role
Prerequisites: NURS 2510, 2520. Corequisite: NURS 2910. Study of the associate degree nurse’s professional roles with emphasis on the nurse as a manager of care. Includes discussions for obtaining, maintaining, and changing employment in the current health care environment. Additional focus on principles of nursing management, legal/ethical issues, and professional organizations. Web-enhanced. One credit hour.

NURS 2199, 2299, 2399 Special Topics in Nursing
Prerequisite: eligible to enroll in or enrolled in NURS 2510/2520, or consent of chairperson. An elective credit hour course in the nursing program. Provides opportunity for advanced nursing students to use the nursing process to explore and coordinate projects of their own choosing as a health care professional in community and service learning settings. The students will spend fifteen hours for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the project and will be agreed upon in advance. One, two, or three credit hours.

NURS 2201 Pharmacology for Nurses
Prerequisites: NURS 1805 and NURS 1100. An elective web-based nursing course presenting the essential concepts of pharmacology. Designed to promote the use of critical thinking in the application of drug therapy. Emphasis is placed on the integration of pharmacological concepts and the nursing process. Equivalent to two hours lecture per week. Two credit hours.

NURS 2202 Diagnostic Studies in Nursing
An elective web-based nursing course presenting common laboratory and diagnostic tests and procedures and the corresponding nursing implications for patients across the lifespan and in various stages of health and illness. Emphasis is on the nursing process in patient preparation and education from procedures.
Web-based. Two credit hours.

NURS 2510 Obstetric Nursing
Prerequisites: NURS 1510, 1520, MATH 1315 or 1302, and CHEM 1400 (CHEM 1400 may be taken concurrently). A study of developmental tasks of young adulthood and the newborn. Nursing care emphasizes use of the nursing process with the childbearing family in clinical laboratory experiences in selected health settings under faculty supervision. Traditional Option: four hours lecture, 12 hours laboratory per week for one-half semester. Accelerated Traditional Option: five hours lecture, 15 hours laboratory per week for six weeks. Five credit hours.

NURS 2520 Pediatric Nursing
Prerequisites: NURS 1510, 1520, MATH 1315 or 1302. Prerequisite or Corequisite: CHEM 1400. A study of developmental tasks of infancy through adolescence and of family relationships. Nursing care emphasizes use of the nursing process with children and their families in clinical laboratory experiences in selected health settings under faculty supervision. Traditional Option: four hours lecture, 12 hours laboratory per week for one-half semester. Accelerated Traditional Option: five hours lecture, 15 hours laboratory per week for six weeks. Five credit hours.

NURS 2910 Adult Nursing III
Prerequisites: NURS 2510, 2520, CHEM 1400, and BIOL 2401 (BIOL 2401 may be taken concurrently). Corequisite: NURS 2310. Focuses on nursing care of patients with multiple complex unmet needs through numerous clinical laboratory experiences in selected health settings. Multiple roles of the nurse are emphasized and practiced with an emphasis on the nurse as manager of care. The last four weeks of the course are an elective, team focused on use of the nursing process with a variety of patients while providing total patient care under the supervision of a nurse preceptor and faculty. Four hours lecture per week for eleven weeks, eight hours laboratory per week for eleven weeks. One hour seminar and 90 hours laboratory or last four weeks of semester. Nine credit hours.
The department offers two degrees: bachelor of science and bachelor of arts, and a concentration in applied physics. The bachelor of science degree prepares students for admission to graduate work in physics or astronomy.

The bachelor of arts degree is for students who plan to specialize in graduate school without sacrificing the advantages of a liberal arts undergraduate education. This degree is also suitable for premedical students and others who do not plan professional careers in physics. Options are offered in physics, medical physics, astronomy, planetarium science, and secondary education.

The concentration in applied physics prepares students for work in the applied or engineering sciences. Options in this concentration are chemical physics, electronics, and geophysics. Minors are offered in astronomy, physics, and planetarium science.

The department uses specialized equipment, including a 12-inch computer-controlled telescope with an electronic camera. A survey of galaxies gives students the opportunity to work with real infrared imaging data and to use software employed at the National Optical Astronomy Observatories and the Hubble Space Telescope. The department has active research programs in astronomy, astrophysics, and optics. All of these programs analyze data using the department’s multi-user computer system, which is connected to national and international networks.

The department encourages the involvement of undergraduates in research. In recent years undergraduates have participated in research at Kitt Peak National Observatory, Steward Observatory, Lawrence Berkeley National Laboratory, Fermi National Accelerator Laboratory, and Brookhaven National Laboratory. This has helped undergraduates in this program to become nationally competitive for research awards and for jobs that require application of modern technology.

The department's planetarium, the largest in the state, has an automated projector in a 40-foot dome with extensive auxiliary projectors and a high-quality sound system. A 17-inch heliostat is used to project an image of the sun on the planetarium dome. Students desiring a career in astronomy or planetarium education normally major in physics.

The department sponsors an active chapter of the Society of Physics Students and the physics honor society, Sigma Pi Sigma. Anyone interested in physics is invited to join the chapter.

**Admission Requirements**

To be admitted into a physics degree program, a student must have a cumulative UALR GPA of 2.00 or greater and must be eligible to enroll in MATH 1302 and RHET 1311. Students interested in majoring in physics or astronomy should contact the chairperson of the Department of Physics and Astronomy to declare a major and be assigned an advisor to help plan a schedule that will permit graduation in a timely manner.

Students interested in majoring in physics are encouraged to discuss curricula and possible career opportunities with members of the physics and astronomy faculty before the end of the freshman year.

Students should take Calculus I, a prerequisite for Physics for Scientists and Engineers I, early in their academic career. Entering students with preparation in calculus may enroll in Physics for Scientists and Engineers I in the first semester of the freshman year. Most upper-level physics courses require Calculus III as a prerequisite. Additional recommended mathematics courses are found in the descriptions of the physics degree programs. Physics students are also advised to complete a college chemistry course. Decisions regarding equivalency of courses and situations in which students have tested out of courses will be made by the chairperson of the Department of Physics and Astronomy.

Students considering high school physics teaching should follow the secondary education option in the bachelor of arts curriculum. They should consult the Department of Education for information about education courses and programs.

**Honors Program in Physics**

The department offers an honors program to provide qualified students the opportunity to pursue advanced study and receive appropriate recognition. This program is distinct from graduation with honors and does not replace it. Interested students may apply for admission to this program after they have completed Physics for Scientists and Engineers I and II.

Participants in the honors program are selected by the department faculty during the junior year, usually before the second semester. Minimum requirements for admission into the program are a 3.25 grade point average overall and a 3.25 grade point average in all physics courses. These averages must be maintained for continued participation in the program.

Honors students must take at least four hours of independent study or undergraduate research related to a project in addition to the usual requirements for graduation. The study will be on an advanced topic and will involve research covering two to four semesters. The topic must be approved by the department chairperson, who will assign a faculty member to supervise the study. On successful completion of the project, the student must present the results of the study to an appropriate scientific body and submit a thesis, approved by the faculty supervisor, to the department chairperson.
Core Requirements

Second Language Requirement

Required courses:¹

PHYS 2321 Physics for Scientists and Engineers I
PHYS 2322 Physics for Scientists and Engineers II
PHYS 2121 Physics for Scientists and Engineers I Laboratory
PHYS 2122 Physics for Scientists and Engineers II Laboratory
PHYS 3323 Physics for Scientists and Engineers III
PHYS 3123 Physics for Scientists and Engineers III Laboratory
PHYS 4111, 4211 Advanced Laboratory I
PHYS 4190 Seminar

Physics option:

PHYS 3311 Mechanics I
PHYS 4321 Electromagnetism I

Seven additional credit hours of upper-level physics courses.

Medical physics option:

PHYS 3311 Mechanics I
PHYS 4321 Electromagnetism I
PHYS 3330 Medical Physics

Four additional credit hours of upper-level physics courses.

Astronomy option:

ASTR 1301 Introduction to Astronomy Laboratory
ASTR 1301 Introduction to Astronomy
ASTR 3401 Scientific Computing and Image Processing in Astronomy
PHYS 3311 Mechanics I
PHYS 4321 Electromagnetism I

Three additional credit hours of upper-level physics courses.

Planetarium science option:²

ASTR 1301 Introduction to Astronomy Laboratory
ASTR 1301 Introduction to Astronomy
ASTR 3401 Scientific Computing and Image Processing in Astronomy
PHYS 3350 Electronics
PHYS 4375 Planetarium Management
PHYS 4376 Planetarium Technology

1. PHYS 1321, PHYS 1322, PHYS 1121, PHYS 1122 may be substituted for PHYS 2321, PHYS 2322, PHYS 2121, PHYS 2122 with the department chairperson’s approval.
2. Students in this concentration should consider a minor in art, theatre arts, management, or general business.

Secondary education option:

ASTR 1301 Introduction to Astronomy Laboratory
ASTR 1301 Introduction to Astronomy
ASTR 3401 Scientific Computing and Image Processing in Astronomy
PHYS 3350 Electronics
PHYS 3315 Teaching Physics in the Secondary School
IGSC 4401 Integrated Science Methods
MATH 1451 Calculus I
MATH 1452 Calculus II
MATH 2453 Calculus III
ERSC 1302 Physical Geology
ERSC 1102 Physical Geology Laboratory
ERSC 1303 Historical Geology
ERSC 1103 Historical Geology Laboratory
ERSC 2310 Mineralogy or ERS 2320 Geologic Methods
CHEM 1402 General Chemistry I
CHEM 1403 General Chemistry II
CHEM 2310 Analytical Chemistry I
CHEM 2311 Analytical Chemistry II

One course (3 hours) from:

ERSC 3311 Igneous and Metamorphic Petrology
ERSC 3330 Structural Geology
ERSC 3350 Sedimentology
ERSC 3360 Paleobiology
ERSC 3372 Surficial Hydrology

One course (4 hours) from:

ERSC 4480 Earth Systems I
ERSC 4481 Earth Systems II
CHEM 3350 General Organic Chemistry I
CHEM 3150 Organic Chemistry Laboratory I
CHEM 3351 General Organic Chemistry II
CHEM 3151 Organic Chemistry Laboratory II

Students must complete a minor in secondary education consisting of 18 hours of courses in the College of Education. See “Secondary Teacher Licensure” on page 45 for information about these courses.

Bachelor of Science

The bachelor of science with a major in physics requires 36 hours including at least 28 hours of upper-level physics courses. In addition to Calculus I-IV, advanced calculus is also recommended. The required lower-level courses are PHYS 2321, 2322, 2121, and 2122. (PHYS 1321, 1322, 1121, 1122 may be substituted with the department chairperson’s approval). The required upper-level courses are PHYS 3323, 3123, 3311, 4111, 3350, 4190, 4310, 4321, 4331, and 4112. At least two of these courses are required: 3300, 4322, 4340, 4350, 4360, 4370, or 4380.

Applied Physics Concentration

The applied physics concentration prepares the student for interdisciplinary areas, such as chemical physics, electronics, engineering physics, and geophysics, which are important in modern society. For example, exploration for energy resources requires sophisticated techniques. Likewise, industrial applications of chemistry and electronics require knowledge of physics and the technical principles it entails. A physics degree with additional training in other disciplines provides enhanced skills for industry and other applied areas. Each concentration requires a minor in mathematics and at least 22 upper-level hours in physics.

Core courses:¹

PHYS 2321 Physics for Scientists and Engineers I
PHYS 2322 Physics for Scientists and Engineers II
PHYS 2121 Physics for Scientists and Engineers I Laboratory
PHYS 2122 Physics for Scientists and Engineers II Laboratory
PHYS 3323 Physics for Scientists and Engineers III
PHYS 3123 Physics for Scientists and Engineers III Laboratory
PHYS 3311 Mechanics I

PHYS 3350 Electronics
PHYS 4190 Seminar
PHYS 4321 Electromagnetism I
PHYS 4111, 4211 Advanced Laboratory I
PHYS 4112, 4212 Advanced Laboratory II

Chemical physics option:

CHEM 1402 General Chemistry I
CHEM 1403 General Chemistry II
CHEM 3350 General Organic Chemistry I
CHEM 3150 Organic Chemistry Laboratory I
CHEM 3351 General Organic Chemistry II
CHEM 3151 Organic Chemistry Laboratory II
CHEM 3370 Physical Chemistry: Thermodynamics and Kinetics
CHEM 3371 Physical Chemistry: Quantum and Statistical Mechanics

Electronics option:

This option is currently under revision; check with the department for a list of approved courses for this concentration.

Geophysics option:

ERSC 1302 Physical Geology
ERSC 1102 Physical Geology Laboratory
Minor in Astronomy
A minor in astronomy requires at least 19 credit hours of astronomy and physics courses. The required astronomy courses are ASTR 1301, 1101, and 3401. The required physics courses are PHYS 2321, 2322, 2121, and 2122. (PHYS 1321, 1322, 1121, 1122 may be substituted for 2321, 2322, 2121, 2122 with the department chairperson’s approval). An additional three credit hours of physics or astronomy courses are required.

Minor in Physics
A minor in physics requires at least 18 credit hours of physics courses. The required lower-level courses are PHYS 2321, 2322, 2121, and 2122. (PHYS 1321, 1322, 1121, 1122 may be substituted for 2321, 2322, 2121, 2122 with the department chairperson’s approval). The required upper-level courses are PHYS 3323 and 4111 or 4112. At least 10 credit hours of upper-level courses are required.

Minor in Planetarium Science
Courses required for this minor are: ASTR 1301, 1101, 3401, and PHYS 1321, 1322, 1121, 1122, 4375, and 4376. (PHYS 2321, 2322, 2121, 2122 may be substituted for PHYS 1321, 1322, 1121, 1122).

Courses in Astronomy (ASTR)
ASTR 1100 Observational Astronomy
An introduction to astronomy, the apparent movements of the sun, and constellations. Special facilities include the 12-inch computer-controlled telescope with electronic camera and the Planetarium. The course includes lectures, discussions, demonstrations, and laboratory experiments. Offered nights only. One credit hour.

ASTR 1101 Introduction to Astronomy Laboratory
Prerequisite or corequisite: ASTR 1301 or 1311. A laboratory course designed to accompany ASTR 1301. A variety of activities in data acquisition and analysis which tie concepts discussed in the classroom to real-world experiences. Open to astronomy majors with permission of the chairperson. One credit hour.

ASTR 1301 Introduction to Astronomy
Study of the process of science by which knowledge about our place in the cosmos is obtained. Examples of possible observations and the inferences drawn from them. Emphasis on how we obtain our knowledge and the certainty of various parts of it. A core curriculum course. Three credit hours.

Courses in Physics (PHYS)
PHYS 1300 Physics and Society
A general education course with no mathematics prerequisite designed for the non-science major but open to all students. It considers the relationship of physics and astronomy to various aspects of societal problems. Not part of the core curriculum. Three hours lecture. Three credit hours.

PHYS 1100 Physics and Society Laboratory
Prerequisite or corequisite: PHYS 1300. Designed to examine some experimental aspects of topics discussed in PHYS 1300. Two hours laboratory. One credit hour.

PHYS 1310 Physical Concepts
Prerequisite: MATH 0301 or equivalent. A one-semester course for students in programs of the health related professions. An introduction to the concepts of mechanics, properties of matter, heat, sound, electricity and magnetism, light, and atomic and nuclear physics. Three hours lecture. Three credit hours.

PHYS 1110 Physical Concepts Laboratory
Corequisite or prerequisite: PHYS 1310. Designed to examine some experimental aspects of topics discussed in PHYS 1310. Two hours laboratory. One credit hour.

PHYS 1311 Introduction to Physics
A one-semester survey of the major topics of physics, designed for the student who plans to take PHYS 1321 or 2321 but has not had high school physics or the equivalent. Does not meet the laboratory science requirement. Three hours lecture. Three credit hours.

PHYS 1320 Musical Acoustics
An introduction to the acoustical foundations of music and speech. Covers the generation and analysis of tones produced by the various musical instruments and the voice, acoustic characteristics of the speech signal, noise pollution, laboratory demonstrations, and acoustical measurements. Three hours lecture. Three credit hours.

PHYS 1120 Musical Acoustics Laboratory
Prerequisite or corequisite: PHYS 1320. Laboratory facilities are available for determining the pitch of musical sounds; filtering music; speech; sine, square, and triangular waves; analyzing the spectrum of sounds; determining one’s threshold of hearing; electronic synthesis of sounds; studying noise pollution; and measuring reverberation time. Two hours laboratory. One credit hour.

PHYS 1321 Elementary Physics I
Prerequisite: MATH 0301 or equivalent, high school physics or PHYS 1311 or equivalent, or consent of instructor. Introduction to the fundamental principles underlying the foundations of classical and modern physics. An algebra-based course designed for majors in the life sciences, pre-professional students, and engineering technology students but is open to any student who meets the prerequisites. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1121 Elementary Physics I Laboratory
Prerequisite or corequisite: PHYS 1321. Two hours laboratory. One credit hour.

PHYS 1322 Elementary Physics II
Prerequisite: PHYS 1321. Continuation of PHYS 1321. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1122 Elementary Physics II Laboratory
Prerequisite or corequisite: PHYS 1322. Two hours laboratory. One credit hour.

PHYS 1381 Applied Physics I
Prerequisite: MATH 0301 or equivalent. Introduction to the fundamental principles underlying the foundation of classical physics and the application of those principles to technical problems. A non-calculus course designed for students in technical areas, such as engineering technology or architecture. Open to any student who meets the prerequisites. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1181 Applied Physics I Laboratory
Prerequisite or corequisite: PHYS 1381. Two hours laboratory. One credit hour.

PHYS 1382 Applied Physics II
Prerequisite: PHYS 1381, 1181. A continuation of PHYS 1381 with applications in electricity and magnetism, optics, and modern physics. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1182 Applied Physics II Laboratory
Prerequisite or corequisite: PHYS 1382. Two hours laboratory. One credit hour.

PHYS 2321 Physics for Scientists and Engineers I
Prerequisite: MATH 1304 or 1451. A calculus-based introduction to the fundamental principles underlying classical physics and modern physics and the applications of those principles in science and engineering. Three hours of lecture and one hour optional discussion. Three credit hours.

PHYS 2121 Physics for Scientists and Engineers I Laboratory
Prerequisite or corequisite: PHYS 2321. Two hours laboratory. One credit hour.
PHYS 2322 Physics for Scientists and Engineers II
Prerequisites: PHYS 2321 and MATH 1305 or 1452. Continuation of PHYS 2321 for students majoring in physics, astronomy, chemistry, computer science, engineering, geology, information science, mathematics, and systems engineering. Topics include electricity, magnetism, optics, relativity, and quantum physics. Three hours of lecture and one hour optional discussion. Three credit hours.

PHYS 2122 Physics for Scientists and Engineers II Laboratory
Prerequisite or corequisite: PHYS 2322. Two hours laboratory. One credit hour.

PHYS 2391 Cooperative Education Work Experience I
Prerequisite: consent of department chairperson. Corequisites: PHYS 1321, 1211 or PHYS 2321, 2121. Designed to enhance college education through career exploration in astronomy, engineering physics, or physics. A minimum of nine hours work per week is required. Prerequisites: varies depending on the nature of the work experience and will be specified by a contract. Three credit hours.

PHYS 3123 Physics for Scientists and Engineers III Laboratory
Prerequisite or corequisite: PHYS 3332. Three hours laboratory. One credit hour.

PHYS 3260 Laboratory Techniques in Nuclear Physics
Prerequisite: PHYS 2322. An introduction to the equipment and laboratory techniques of experimental physics. Accelerators, vacuum systems, particle optics and kinematics, detection and analysis of nuclear radiations, and electronic instrumentation. Two hours lecture, one hour optional discussion. Two credit hours.

PHYS 3315 Teaching Physics in the Secondary School
Prerequisite: consent of instructor. A study of physics laboratory experiments and demonstrations available for secondary school physics courses. Three hours lecture. Three credit hours.

PHYS 3320 Physics of the Earth
Prerequisites: PHYS 2322; CHEM 1401 or 1403. Fundamental problems in solid earth geophysics: precession, wobble, and tidal friction; seismology and the internal structure of the earth; origin of the geomagnetic field; physical properties of mantle materials; and radioactivity and the age of the earth. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 3323 Physics for Scientists and Engineers III
Prerequisites: PHYS 2322 or 1322 and MATH 2306, 1452 or 2453. A continuation of topics in relativity and quantum physics introduced in PHYS 2322 or 1322 for students majoring in physics, astronomy, chemistry, computer science, engineering, geology, information science, mathematics, and systems engineering. Three hours of lecture and one hour optional discussion. Three credit hours.

PHYS 3330 Medical Physics
Prerequisites: PHYS 1321, 1322 or 2321, 2322. The applications of the concepts, methods, and principles of physics to the diagnosis and treatment of human disease. Three hours lecture. Three credit hours.

PHYS 3130 Medical Physics Laboratory
Prerequisite or corequisite: PHYS 3330. Approximately 18 hours of hospital time supplemented by laboratory work in the Physics Department. Three hours laboratory. One credit hour.

PHYS 3350 Electronics
Prerequisites: PHYS 2322, or 1322 and consent of the instructor. An introduction to digital circuit concepts and basic systems. Digital measurements, switching concepts and logic, flip-flops and multivibrators, counters and registers, digital and analog digital systems. Nine hours laboratory. Three credit hours.

PHYS 3380 Astronautics
Prerequisites: PHYS 2321, 2121, ASTR 1301, 1101. The development of astronautics, with emphasis on the extension of aviation into aerospace and the impact of the space age on our society and culture. An introduction to the fundamentals of rocket and space vehicle development, propulsion, dynamics, transfer orbits, and space navigation. Three hours lecture. Three credit hours.

PHYS 3391 Cooperative Education Work Experience II
Prerequisite or corequisite: PHYS 3330. Major in physics, junior standing, and consent of department chairperson. Further work experiences to enhance college education through an internship in astronomy, engineering physics, or physics. A minimum of nine hours work per week. The exact number of hours will depend on the nature of the work experience and will be specified by a contract. Three credit hours.

PHYS 4190 Seminar
Presentation of selected papers by students, faculty members, and invited speakers at weekly departmental meetings. Discussions, analysis, and implications of theoretical and experimental studies in the physical sciences. One hour. One credit hour.

PHYS 4111, 4211 Advanced Laboratory I
Prerequisite: consent of instructor. Advanced experiments to acquaint the student with the problems and techniques of research activities. Equipment such as a 12-inch computer-controlled telescope with electronic camera, a 17-inch heliostat, and audio spectrum analyzers are available. The advanced laboratory exposes the student to modern research techniques and provides many traditional laboratory experiences. Three to six hours of laboratory. One or two credit hours.

PHYS 4112, 4212 Advanced Laboratory II
Prerequisite: PHYS 4111 or 4211. Continuation of PHYS 4111 or 4211. Three to six hours laboratory. One or two credit hours.

PHYS 4100, 4200, 4300 Independent Study
Prerequisite: consent of chairperson. Individual research by the advanced student. Topics determined on the basis of faculty interests and availability. One to three hours per credit hour. Exact time and nature of the experience will depend on the particular subject of the independent study and will be agreed on at the beginning of the term by the student and the instructor. One, two, or three credit hours.

PHYS 4310 Statistical Thermodynamics
Prerequisite: PHYS 3222, 3321. A microscopic, unified approach to thermodynamics and statistical mechanics with applications to ideal gases, including blackbody radiation and conduction electrons, magnetic systems, the Debye model, and chemical and phase equilibria. Dual-listed in the UALR Graduate Catalog as PHYS 5310. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4311 Classical Mechanics
Prerequisites: PHYS 2321, MATH 2306 or 1452, or consent of the instructor. Concepts of Newtonian mechanics, dynamics of particles and systems of particles, oscillation, vector analysis, dynamics of rigid bodies, moving coordinate systems, continuous media, small oscillations, and the methods of Lagrange and Hamilton. Dual-listed in the UALR Graduate Catalog as PHYS 5311. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4321 Electromagnetism I
Prerequisite: PHYS 2322. Includes the Coulomb and Gauss laws, the Poisson and Laplace equations and solutions in several coordinate systems, electric and magnetic energy, AC and DC circuits, Ampere’s and Faraday’s laws, the vector potential, Maxwell’s equations, and the propagation of electromagnetic waves. Dual-listed in the UALR Graduate Catalog as PHYS 5321. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4322 Electromagnetism II
Prerequisite: PHYS 4321. Continuation of PHYS 4321. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4330 Mathematical Methods in the Physical Sciences
Prerequisite: MATH 2306 or 1452. Review of vector calculus, differential equations governing physics, and applications of Fourier series, statistics, probability, error theory, partial differentiation, and functions of a complex variable. Dual-listed in the UALR Graduate Catalog as PHYS 5330. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4331 Modern Physics I
A more detailed treatment of the topics of PHYS 3323. Relativity, quantum mechanics, statistical physics, atomic and nuclear physics, and elementary particles. Dual-listed in the UALR Graduate Catalog as PHYS 5331. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4332 Modern Physics II
Prerequisite: PHYS 3331. Continuation of PHYS 3331. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4340 Solid State Physics
Prerequisite: PHYS 3323. Structure of crystals, dispersion relations, specific heat, phonons, electric and magnetic properties of insulators and metals, band theory of metals, insulators and semiconductors, superconductivity. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4350 Quantum Mechanics I
Prerequisite: PHYS 3323. Concepts and history of quantum mechanics, experimental basis, the uncertainty principle, the Schrodinger equation with applications to simple systems, the hydrogen atom, perturbation theory, the interpretations of quantum mechanics, symmetry principles. Dual-listed in the UALR Graduate Catalog as PHYS 5350. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4360 High Energy and Nuclear Physics
Prerequisite: PHYS 3324. Properties of the nucleus, nuclear structure and stability, quark‐gluon structure of hadrons, thermodynamics of large ensembles of hadrons, nuclear reactions, instrumentation and accelerators. Dual-listed in the UALR Graduate Catalog as PHYS 5360. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4370 Advanced Theoretical Physics
Prerequisite: consent of instructor. Topics vary with the experience and interests of students. Some possible topics are scattering of waves, plasma physics, atmospheric physics, fluid dynamics, and quantum optics. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4375 Planetarium Management
Prerequisites: ASTR 1301, 1101, consent of instructor. Administration, supervision, and management of planetariums in schools, colleges, museums, and other institutions, involving such topics as role and scope, personnel, budgets, programming, planning, and use of planetariums in the contemporary scene. Especially recommended for planetarium directors. Three hours lecture. Three credit hours.

PHYS 4376 Planetarium Technology
Prerequisites: ASTR 1301, 1101, consent of instructor. Production and presentation of programs at all levels using the Planetarium and its auxiliary equipment. Special emphasis on planetarium astronomy, programming, operations, maintenance of equipment, and the technical aspects of the planetarium field. Especially recommended for those planning to enter into a planetarium career. Three hours lecture. Three credit hours.
PHYS 4380 Wave Motion and Optics
Prerequisite: PHYS 2322. The wave equation and solutions, wave propagation, coherence, interference, diffraction, polarization, refraction and reflection, dispersion, the interactions of light with matter, Huygens’ principle, optical instruments, quantum optics. Dual-listed in the UALR Graduate Catalog as PHYS 5380. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4289, 4389, 4489 Undergraduate Research
Prerequisites: consent of department chairperson, junior or senior standing, compliance with approved guidelines (available from chairperson). Trains the student to analyze, plan and conduct experimental work on a research problem. Frequent conferences and a study of research literature with a final report are required. May extend over two semesters. Four to six hours per week for each hour of credit earned. 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. Two, three, or four credit hours.

PHYS 4199, 4299, 4399, 4499 Special Topics
Prerequisite: consent of instructor. Advanced, specialized topics of current interest in physics and astronomy. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, three, or four hours of lecture or equivalent per week. One, two, three, or four credit hours.
The mission of the Donaghey College of Information Science and Systems Engineering is to educate the next generation of technical professionals in the skills and knowledge base necessary to create and manage the technology-based enterprises that will provide future economic growth and an improved standard of living for the State of Arkansas and its citizens. The College’s expectation is for every Arkansas child to have the opportunity to participate in the new knowledge-based digital economy of the 21st Century. This mission includes technological education at all levels, from high school through advanced graduate degrees, as well as contributions through scholarly research and community involvement. In meeting this mission, the College offers professional undergraduate BS degrees in Computer Science, Construction Management, Engineering Technology, Applied Science, and Information Science. In addition, it offers a BS degree in Systems Engineering with options in Mechanical, Electrical, Computer and Telecommunications Engineering. It also offers the only interdisciplinary doctoral degree in the State, the PhD in Applied Science with options in six disciplines including Applied Computing and Engineering Science and Systems. The College also participates in the MS-PhD. program in Bioinformatics offered jointly with the University of Arkansas for Medical Sciences. Additional graduate programs in the College include MS degrees in Applied Science, Computer Science and Information Quality. It also offers a graduate certificate program in Systems Engineering. Extensive outreach to the general undergraduate population is through our Computer Literacy classes and the acclaimed Information Technology (IT) Minor, designed to provide the non-technology majors with the IT tools necessary to command leadership positions in today’s IT-enabled enterprises. Outreach to the community includes the IT certificate program for in-service learning, the web-based pre-calculus course for high school seniors, and extensive partnering with high schools across the State for in-school activities and summer programs. Specific emphasis is on partnerships with the local and regional industries ranging from direct company input into our programs to in-service courses to directed research projects.

The Donaghey College of Information Science and Systems Engineering is committed to providing the digital and technical work force for Arkansas’ future and to developing a quality faculty that can contribute both to our overall educational needs and to the intellectual base of the State. To accomplish these goals, the College will work with all interested potential students to provide the necessary intellectual basis for them to be successful and will provide its faculty with facilities and resources to make major contributions to our State and to the new knowledge base of this new Century. We will work closely with the University of Arkansas for Medical Sciences (UAMS) and other educational institutions in the State, and we will enhance our resources through the acquisition of external funds from Federal agencies, private foundations, and other private enterprises.

Thus, the College’s vision is to be the College of choice for students from the state who are interested in a technology-based education at any level; to have a faculty that is admired and respected regionally, nationally, and internationally; and to be the institution that our knowledge-based industries turn to for new employees and intellectual support for their growth strategies.

**DCISSE Core Requirements**

The college has a core curriculum adapted to the needs of its technologically-oriented degrees. Each bachelor’s degree program requires this core which includes courses in communications, arts, humanities, history, and social sciences. No mathematics or science courses are in the core since all majors in the college already include substantial mathematics and science requirements.

Listed in the chart on the following page are the required categories, the number of hours required in each category, and the specific courses that fulfill each core requirement. Some programs require specific courses within the choices listed in the chart; please check the curriculum lists for individual programs.
Core Requirements for DCISSE Bachelor Degrees

English Composition (9 hours)
- RHET 1311 Composition I
- RHET 1312 Composition II
- SPCH 1300 Speech Communication

Fine Arts/Humanities (5-6 hours)
- One course from the following:
  - MUHL 2200 Introduction to Music
  - ARHA 2200 Introduction to Visual Art
  - DRTH 2200 Introduction to Theatre and Dance
  - FNAR 2300 Introduction to Fine Arts I

Social Sciences (9 hours)
- One course from the following:
  - POLS 1310 American National Government
  - HIST 2311 U.S. History to 1877
  - HIST 2312 U.S. History since 1877

One course from the following:
- ANTH 2316 Cultural Anthropology
- CRJU 2300 Introduction to Criminal Justice
- ECON 2301 Survey of Economics
- GEOG 2312 Cultural Geography
- GNST 2300 Introduction to Gender Studies
- JOUR 2330 Mass Media and Society
- POLS 2301 Introduction to Political Science
- PSYC 2300 Psychology and the Human Experience
- RELS 2305 World Religions
- SOCI 2300 Introduction to Sociology

One course from the following:
- HIST 1311 History of Civilization I
- HIST 1312 History of Civilization II

Additional Communications, Humanities, Arts, and Social Sciences (3 hours)

Three (3) upper-level hours in communication, humanities, arts, or social sciences are required. These hours should be selected to provide further depth in one of the disciplines represented by the core courses listed above. Specific course selection must be done with the approval of the advisor.

Technical Writing (3 hours)
- RHET 3316 Writing for the Workplace
- RHET 3326 Technical Writing
- MGMT 3380 Business Communication

Information Technology Minor

Admission Standards and Procedures

UALR’s information technology (IT) minor is designed to prepare students for entry-level positions in knowledge-based industries. It is intended for students majoring in the arts, humanities, social sciences, sciences, and other programs that do not have an intensive computing component. These students do not need to have extensive background in computers or technology, but they should demonstrate:

- Problem-solving skills
- Leadership abilities
- Oral and written communication skills
- Interests in information technology

Visit [http://itech.ualr.edu/](http://itech.ualr.edu/) for a description of the IT minor or to complete an application. Materials may also be obtained at the information technology office, Donaghey College of Information Science and Systems Engineering (Engineering Technology and Applied Sciences Building [ETAS] Room 353, phone (501) 569-8743). To insure consideration of applications, check with the IT minor office for application deadlines.

Admission Requirements

To apply for this program, students must complete or have completed the following:

1. Completion of 30 or more semester hours and a GPA of 2.5 or greater.
2. Declaration of a major at UALR.
3. Submission of an application letter including all of the following:
   - An explanation of how the IT minor might complement the applicant’s major area of study, why the applicant is interested in the minor, and why the applicant believes he or she should be selected for the minor
   - A brief self-evaluation of computer skills
   - Evidence of leadership and problem-solving skills (e.g., projects the applicant has worked on)
   - Evidence of oral and written communication skills

Curriculum

The IT minor consists of three six-hour courses, ITEC 3610, 3650, and 4610. The courses must be taken in sequence. The grading scale for the courses is A, B, I, and NC. An I is given for incomplete work in one or more areas as defined in the Undergraduate Catalog with the exception that a grade of I will convert to a grade of NC instead of F. Any student receiving a grade of NC (No Credit) in an ITEC course will be removed from the program.

Courses in Information Technology (ITEC)

ITEC 3610 Introduction to Information Technology and Applications

Prerequisite: admission to the information technology minor. This course introduces students to the information technology industry and knowledge-based tools. Students demonstrate proficiency in such tools as spreadsheet applications, graphic presentation, Internet uses, and programming. Methods include guest speakers, team activities, interpersonal skills, problem solving, time management skills, role playing, and portfolio strategies. Graded A, B, I, or NC. Six credit hours.

ITEC 3650 Guided Applications in Information Technology and Industry Processes

Prerequisite: grade of A, B, or I in ITEC 3610. Project oriented guided applications course. Focus is on broad applications of information technology such as database management, web design, and Internet applications. Students develop web pages to collect data, structure and analyze data using database and spreadsheet software, and present textual and graphical representation of the results. Methods include team projects with rotating roles, problem conceptualization, time management, and presentation skills. Graded A, B, I, or NC. Six credit hours.

ITEC 4610 Project Development and Portfolio Defense

Prerequisite: grade of A, B, or I in ITEC 3650. The project and portfolio development course allows students, under direction of a mentor, to work on real life issues in an active learning environment. Students will present and defend a professional IT portfolio documenting proficiency in the use of technology to solve problems. Methods include IT internships, special projects, or major field applications. This course is to be completed in two phases. The first phase, “Project Planning and Portfolio Development,” includes project identification, needs assessment, and system design specifications. The second phase, “Project Completion and Portfolio Defense,” includes design testing, verification, and customer satisfaction. Students should expect that these two phases should take no less than one semester and no more than one academic year. Graded A, B, I, or NC. Six credit hours.

1. PHIL 2320 is only an option for those majors that do not require IFSC 1110 Introduction to Ethics.
2. ECON 3301 Survey of Economics may be substituted for ECON 2301.
**Department of Applied Science**

**ETAS 575**

569-8000  
569-8202 (fax)

Chairperson:  
Al-Shukri, Haydar, associate professor

University Professor:  
Mazumder, Malay K.

Professors:  
Anderson, Gary T.  
Bhattacharyya, Abhijit  
Karabacak, Tansel  
Hudson, Keith  
Thompson, Gary A.

Associate Professor:  
Wright, Andrew

Assistant Professors:  
He, Qingfang  
Karabacak, Tansel  
Ye, Cang

The Department of Applied Science is an interdisciplinary, graduate only department which supports applied research in a broad set of areas, including combustion and analytical chemistry, biomedical engineering, biotechnology, environmental research, geophysics, optics and solar energy, materials and powder science, applied computing, smart materials and structures, Microelectromechanical Systems (MEMS), robotics and mechatronics, signal processing, and nuclear magnetic resonance.

The department offers two degrees: the doctor of philosophy and the master of science. Each degree has several emphases, which are explained under the separate programs. Faculty housed in several other departments in both the College of Science and Mathematics (CSAM) and the Donaghey College of Information Science and Systems Engineering (DCISSE) participate in the various emphasis tracks.

**Doctor of Philosophy in Applied Science**

The Department of Applied Science doctoral program serves both the College of Science and Mathematics and the Donaghey College of Information Science and Systems Engineering. Faculty participating in the doctoral program are drawn from the Departments of Applied Science, Biology, Chemistry, Computer Science, Information Science, Engineering Technology, Mathematics and Statistics, Physics and Astronomy, and Systems Engineering. Due to the diverse nature of the faculty, the program offers opportunities in interdisciplinary science and engineering areas.

The following emphasis areas are offered: applied biosciences, applied chemistry, applied computing, applied physics, computational science, and engineering science and systems. The degree is awarded upon completion of a program of advanced study including a significant original dissertation in applied research or design. Dissertation research must be done in residence under the supervision of an applied science faculty member. The research must be relevant to the emphasis area in which the student is pursuing a degree.

All emphases have different program requirements, which are described under “Applied Science” in the UALR Graduate Catalog.

**Master of Science**

The master of science degree is an interdisciplinary degree to advance a student’s knowledge beyond the baccalaureate degree and to teach the student how to approach a research project. The degree has two emphasis areas: applied physics and engineering science and systems. The specific requirements are described under “Applied Science” in the UALR Graduate Catalog.

**Other Opportunities**

A number of research assistantships are available, on a competitive basis, for the full support of qualified students in the doctoral program only. Other opportunities may exist to teach laboratories and classes for other departments in the Donaghey College of Information Science and Systems Engineering and the College of Science and Mathematics. Academic requirements for admission to the program and for graduate degrees are listed in the UALR Graduate Catalog. For more information see the UALR Graduate Catalog web site, http://www.ualr.edu/graddept/ or visit the Applied Science department’s web page at http://dynamic.appsci.ualr.edu/

**Courses in Applied Science (ASIC)**

**ASIC 4310 Introduction to Signal Processing**  
Prerequisite: MATH 3322 or equivalent. Introduction to the fundamental concepts and mathematics 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, power spectral density, and time delays. Bode plots, poles and zeros, state space. Standard system models (ARMA, ARMAX). FIR and IIR filters. Dual-listed in the UALR Graduate Catalog as ASIC 5310. Three hours lecture. Three credit hours.

**ASIC 4315 Advanced Dynamics**  
Prerequisites: MATH 2453, PHYS 3311. Kinematics of translational 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, planetary motion. Dual-listed in the UALR Graduate Catalog as ASIC 5315. Three credit hours.

**ASIC 4320 Introductory Continuum Mechanics**  
Prerequisites: MATH 2453, MATH 3322, and PHYS 3300 or equivalents. This introductory course on Continuum Mechanics will take a unified approach to train the student in the modeling of deformation in solids, fluid flow and electric fields. Using a first principles approach, the fundamental conservation laws of mass, charge, momentum and energy will be covered. Applications to deformation in solids, heat transfer, fluid flow and electric fields will be addressed. Dual-listed in the UALR Graduate Catalog as ASIC 5320. Three credit hours.

**ASIC 4325 Measurement Techniques**  
Prerequisite: SYEN 2315 or equivalent. Principles of operation and implementation of transducers used in electronic measurement systems. Sensors used for the measurement of strain, capacitance, pressure, 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 three hours laboratory per week. Dual-listed in the UALR Graduate Catalog as ASIC 5325. Three credit hours.

**ASIC 4330 Acoustics I**  
Prerequisite: MATH 2453 or equivalent. Development of the equations for acoustics and vibrations. Transducers for measurement of sound and acceleration. Design of sonic actuators using network analysis. Analog and digital processing of signals, including spectral analysis, adaptive signal processing, and cepstral analysis. Application to noise analysis and control, and machinery diagnosis through sound and vibrations measurements. Dual-listed in the UALR Graduate Catalog as ASIC 5330. Three credit hours.

**ASIC 4335 Mechatronics I**  
Prerequisites: MATH 2453 or equivalent, PHYS 3311 or equivalent, or consent of instructor. 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, are covered. Use of electric motors and pneumatics in mechanical systems is covered. Integration of sensors, including potentiometers, limit switches, and yaw rate sensors is covered. Theories of failure will be introduced, and basic stress/strain calculations will be done. Design theories and project management will be introduced. Dual-listed in the UALR Graduate Catalog as ASIC 5335. Three hours lecture. Three credit hours.
ASCI 4340 Mechatronics II
Prerequisite: ASCI 4335 or equivalent. The combination of classical mechanical design, electronic analysis and design, control engineering, and computer science in the design of complex electric/mechanical/controlled systems. Commonly used sensors (encoders, potentionmeters, 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. Dual-listed in the UALR Graduate Catalog as ASCI 5340. Three hours lecture. Three credit hours.

ASCI 4345 Microcontrollers
Prerequisite: SYEN 2315 or equivalent or consent of the instructor. Experimental, project-oriented; architecture, programming, interfacing, design of systems; based on single chip microcontroller. Offered on demand. Dual-listed in the UALR Graduate Catalog as ASCI 5345. Three hours lecture. Three credit hours.

ASCI 4355 Elastic Wave Theory

ASCI 4360 Potential Theory
Solution to Laplace 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 Laplace equation. Bessel function and orthogonality of Bessel function. Legendre function, Associate Legendre function, and orthogonality of Legendre function. Dual-listed in the UALR Graduate Catalog as ASCI 5360. Three credit hours.
The department offers courses covering a wide range of topics in computer science, including programming and programming languages, data structures and algorithms, assembly language, computer architecture, networking, operating systems, compilers, software engineering, file structures, database systems, graphics, artificial intelligence, and theory of computation.

The department seeks to prepare students both for careers in the computing industry and for advanced study in computer science. The department maintains close ties with local computing industries, and encourages its students to participate in the many cooperative and internship opportunities made available through these contacts.

The bachelor of science degree in computer science is accredited by the Accreditation Board for Engineering and Technology (ABET), Computing Accreditation Commission (CAC), a specialized accrediting body recognized by the Council on Postsecondary Accreditation (COPA), and the U.S. Department of Education.

**Admission Requirements**

Students seeking a degree in computer science must apply to the department for admission to the program. Application should be made after the student has completed MATH 1302 or higher with grades of C or greater and enrolled in CPSC 1375/1175. Upon admission the student will be assigned an advisor.

**Major in Computer Science**

Requirements for the BS degree in computer science include the core computer science and mathematics courses and upper-level electives selected from computer science.

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**Bachelor of Science in Computer Science**

**DCISSE Core**

**Computer Science Core**

- CPSC 1175 Introduction to Computer Science Laboratory
- CPSC 1310 Internet Technologies
- CPSC 1375 Programming
- CPSC 2376 Programming or CPSC 2377 Introduction to Game Programming
- CPSC 2380 Data Structures and Algorithms
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 3370 Net-centric Computing: Systems Concepts
- CPSC 3371 Net-centric Computing: Language Concepts
- CPSC 3375 Database Concepts I
- CPSC 3482 Computer Organization I
- CPSC 4210 Computer Ethics
- CPSC 4373 Software Engineering
- CPSC 4392 Capstone Project
- MATH 1451 Calculus I
- MATH 1452 Calculus II
- MATH 2310 Discrete Mathematics
- MATH 3310 Algebraic Structures I or MATH 3312 Linear Algebra

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**Electives:**

**STAT 3352 Applied Statistics I**

**Electives:**

Nine hours of upper-level computer science courses, chosen in consultation with an advisor.

No more than three hours of cooperative education (CPSC 3391 or 4391) can be used to satisfy the elective requirements.

Students majoring in computer science must take the following science courses: either the physics sequence PHYS 2321, 2121, 2322, 2122 or the chemistry sequence CHEM 1402, 1403; and one additional four-hour science course which meets the core science requirement in astronomy, biology, or earth science.

A minimum of three additional hours of mathematics or science courses for majors must be taken in addition to the mathematics and science requirements listed above.

Students must elect a minor field of study. Most minors require 18 to 24 hours of courses. A minor in mathematics is strongly recommended for computer science majors who plan to do graduate work in computer science. The mathematics courses used to meet the major requirements cannot be used as electives in the minor.

Students are also reminded that they must take a total of at least 45 upper-level hours for the bachelor’s degree as they select their electives.
### Bachelor of Science in Computer Science Suggested Curriculum (125 hours)

**First Semester, Fall (17 hours)**
- RHET 1311 Composition I
- MATH 1451 Calculus I
- HIST 1311 History of Civilization I
  or HIST 1312 History of Civilization II
- SPCH 1300 Speech Communication
- CPSC 1375 Programming I
- CPSC 1175 Introduction to Computer Science Laboratory

**Second Semester, Spring (16 hours)**
- RHET 1312 Composition II
- MATH 1452 Calculus II
- CPSC 1310 Internet Technologies
- CPSC 2376 Programming II
- Social Sciences core requirement (3 hours)

**Third Semester, Fall (16 hours)**
- MATH 2310 Discrete Mathematics
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 2380 Data Structures and Algorithms
- PHYS 2321 Physics for Scientists and Engineers I
- PHYS 2121 Physics for Scientists and Engineers I Laboratory
- HIST 2311 U.S. History to 1877
  or HIST 2312 U.S. History since 1877
  or POLS 1310 American National Government

**Fourth Semester, Spring (16 hours)**
- Minor course (3 hours)
  - CPSC 3370 Net-centric Computing: Systems Concepts
  - CPSC 3375 Database Concepts I
  - PHYS 2322 Physics for Scientists and Engineers I
  - PHYS 2122 Physics for Scientists and Engineers I Laboratory
- ENGL 2337 World Literature
  or ENGL 2338 World Literature Themes
  or PHIL 2320 Ethics and Society

**Fifth Semester, Fall (15 hours)**
- Fine Arts core requirement (2 hours)
- CPSC 3371 Net-centric Computing: Language Concepts
- CPSC 3482 Computer Organization I
- MATH 3310 Algebraic Structures I
  or MATH 3312 Linear Algebra
- Minor Course (3 hours)

**Sixth Semester, Spring (15 hours)**
- RHET 3326 Technical Writing
- Unrestricted Elective (3 hours)
- Upper-level CPSC elective (3 hours)
- Math/Science Elective (3 hours)
- Upper-level humanities core requirement (3 hours)

**Seventh Semester, Fall (16 hours)**
- CPSC 4373 Software Engineering
- Unrestricted Elective (3 hours)
- Upper-level CPSC elective (3 hours)
- STAT 3352 Applied Statistics I
- Technical science course with lab (4 hours)

**Eighth Semester, Spring (14 hours)**
- Upper-level CPSC elective (3 hours)
- CPSC 4392 Capstone Project
- CPSC 4210 Computer Ethics
- Upper-level Minor courses (6 hours)

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1. See "DCISSE Core Requirements" on page 190.

### Bachelor of Science in Computer Science Suggested Curriculum—Game Option (123 hours)

**First Semester, Fall (17 hours)**
- RHET 1311 Composition I
- MATH 1451 Calculus I
- SPCH 1300 Speech Communication
- SYEN 1301 Introduction to Computer Systems
- CPSC 1310 Internet Technologies

**Second Semester, Spring (16 hours)**
- RHET 1312 Composition II
- MATH 1452 Calculus II
- ARHA 2200 Introduction to Visual Art
- ARST 1310 Basic Drawing
- SYEN 1302 C/C++ Programming for Engineers and Scientists
  or IFSC 2300 Object-oriented Technology
  or CPSC 1375 Programming I

**Third Semester, Fall (16 hours)**
- RHET 3326 Technical Writing
- MATH 2310 Discrete Mathematics
- SYEN 1301 Introduction to Computer Systems
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 2380 Data Structures and Algorithms
- MATH 3312 Linear Algebra

**Fourth Semester, Spring (16 hours)**
- ARST 1315 Two-Dimensional Design
- STAT 3352 Applied Statistics I
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 2380 Data Structures and Algorithms
- MATH 3312 Linear Algebra

**Fifth Semester, Fall (15 hours)**
- ARST 2318 Designing with New Technologies
- CPSC 3371 Net-centric Computing: Language Concepts
- CPSC 4383 Artificial Intelligence
- IFSC 3315 Applied Networking
- PHYS 2321 Physics for Scientists and Engineers I
- PHYS 2121 Physics for Scientists and Engineers I Laboratory

**Sixth Semester, Spring (15 hours)**
- ARST 3385 Vector Graphics for Illustrators and Designers
- CPSC 3370 Net-centric Computing: Systems Concepts
- CPSC 3366 Interactive Computer Graphics and Animation
- CPSC 3387 Simulation Methods
- PHYS 2322 Physics for Scientists and Engineers I
- PHYS 2122 Physics for Scientists and Engineers I Laboratory

**Seventh Semester, Fall (16 hours)**
- ARST 3386 Digital Imaging for Illustrators and Designers
- RTVF 2306 Introduction to Motion Pictures
- CRJU 2300 Introduction to Criminal Justice
- HIST 1311 History of Civilization I
  or HIST 1312 History of Civilization II
- IFSC 4396 Information Systems Application

**Eighth Semester, Spring (14 hours)**
- ARST 4348 Production Design for the Internet
- CPSC 4392 Capstone Project
- PHIL 2320 Ethics and Society
- HIST 2311 U.S. History to 1877
  or HIST 2312 U.S. History since 1877
  or POLS 1310 American National Government
- Upper-level humanities core requirement (3 hours)
Minor in Computer Science

The minor in computer science requires:

- CPSC 1375 Programming I
- CPSC 1175 Introduction to Computer Science Laboratory
- CPSC 2376 Programming II
  or CPSC 2377 Introduction to Game Programming
- CPSC 2380 Data Structures and Algorithms
- CPSC 2382 Introduction to Computer Systems and Assembly Language
  or CPSC 3370 Net-centric Computing: Systems Concepts
- MATH 1451 Calculus I
  and MATH 1452 Calculus II
- or MATH 1311 Applied Calculus I
  and MATH 1312 Applied Calculus II
- One three-hour upper-level computer science course

Associate of Science in Computer Programming

The associate of science degree in computer programming requires at least 63 hours including the core computer science courses and approved electives selected from computer science, mathematics, statistics, accounting, management, and engineering technology. The list of approved electives may be obtained from the Department of Computer Science.

Computer Science Core

- CPSC 1310 Internet Technologies
- CPSC 1375 Programming I
- CPSC 1175 Introduction to Computer Science Laboratory
- CPSC 2376 Programming II
  or CPSC 2377 Introduction to Game Programming
- CPSC 2380 Data Structures and Algorithms
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 1372 RPG Programming
  or IFSC 1202 Enterprise Information Science II
  or IFSC 2300 Object-oriented Technology
- MATH 1302 College Algebra
- MATH 1303 Trigonometry

Approved Electives (26 hours)

- A list of available courses is in the department office.

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AS Suggested Curriculum

**Freshman Year**

- RHET 1311 Composition I
- RHET 1312 Composition II
- SPCH 1300 Speech Communication
- HIST 2311 U.S. History to 1877
  or HIST 2312 U.S. History since 1877
  or POLS 1310 American National Government
- MATH 1302 College Algebra
- MATH 1303 Trigonometry
- CPSC 1375 Programming I
- CPSC 1175 Introduction to Computer Science Laboratory
- CPSC 1310 Internet Technologies
- Approved electives (8 hours)

**Sophomore Year**

- CPSC 2376 Programming II
  or CPSC 2377 Introduction to Game Programming
- CPSC 2380 Data Structures and Algorithms
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 1372 RPG Programming
  or IFSC 1202 Enterprise Information Science II
  or IFSC 2300 Object-oriented Technology
- Approved electives (18 hours)

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1. Students must receive a C or greater in this course.

2. See “Associate Degree Requirements” on page 25 for a complete list of general requirements for associate degrees.
Courses in Computer Science (CPSC)

CPSC 1175 Introduction to Computer Science Laboratory
Prerequisite: MATH 1302 or equivalent. Corequisite: CPSC 1375. A laboratory course to accompany CPSC 1375. Introduction to editing, compiling, and executing programs on various platforms; UNIX operating system; number systems and number conversions; presentation software, and the Internet. Successful completion of this course requires a grade of C or greater. Two hours laboratory per week. One credit hour.

CPSC 1310 Internet Technologies
See IFSC 1310. Internet Technologies.

CPSC 1370 Computer Literacy
The fundamental concepts of computing in a personal computer environment. Introduction to hardware and software and system configurations. The focus is on practical problem solving using popular PC application software. Word processing, spreadsheets, and databases. This course may not be counted for credit toward a computer science major or minor. Three hours lecture per week. Three credit hours.

CPSC 1372 RPG Programming
Prerequisite: CPSC 1375, MGMT 1310, or equivalent. Report Program Generator is a nonprocedural language for data processing. Input, output, arithmetic, comparison, control breaks, arrays, sequential files, direct-access files. This course may not be counted for credit toward a computer science major or minor. Three hours lecture per week. Three credit hours.

CPSC 1375 Programming I
Prerequisite: MATH 1302 or equivalent. Corequisite: CPSC 1175. Introduction to algorithm development and implementation using control structures, functions, arrays, pointers, and basic object-oriented concepts. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2376 Programming II
Prerequisite: CPSC 1375. Advanced programming concepts including structures, abstract data types, details of object-oriented concepts including encapsulation and polymorphism in current object-oriented language. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2377 Introduction to Game Programming
Prerequisites: CPSC 1375, IFSC 2300 SYEN 1302. Advanced programming concepts including structures, abstract data types, recursive techniques, game-based hands-on experiences for students to learn and understand details of advanced object-oriented concepts in a current object-oriented language. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2380 Data Structures and Algorithms
Prerequisites: CPSC 2376 or CPSC 2377. A systematic study of the main data structures of computer science: arrays, stacks, queues, linked lists, trees, graphs, hash tables. Implementation and analysis of the algorithms and programming techniques for searching, sorting, inserting into, and deleting from these structures; efficiency considerations. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2382 Introduction to Computer Systems and Assembly Language
Prerequisite: CPSC 1375 or equivalent. Introduction to machine architecture, details of the instruction set and addressing modes. Assembly, linking, executing, and debugging of assembly language programs. Additional topics include keyboard and screen handling, string processing, interrupts, binary and decimal arithmetic. Three hours lecture per week. Three credit hours.

CPSC 2391 Cooperative Education
Prerequisite: Computer science, CPSC 2376 or CPSC 2377, and consent of department chairperson. Designed to complement and extend the classroom learning experience through the application of theoretical concepts in a professional work environment. A minimum of 200 hours of work with a participating employer. The exact number of work hours, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the Office of Cooperative Education. Three credit hours.

CPSC 2399 Special Topics
Prerequisite: CPSC 1375, or equivalent or the consent of the instructor. Introduction to a programming language to be selected from the following list: Visual BASIC, C, ADA, Perl, XML, scripting languages, internet programming. This course may be repeated with a different language. This course is not accepted for credit in the computer science major or minor. Three hours lecture per week. Three credit hours.

CPSC 3366 Interactive Computer Graphics and Animation
Prerequisites: MATH 2310 and MATH 3312. Introduces the student to basic graphics architecture, coordinate systems, three-dimensional representations and transformations, simple visible-surface algorithms, introduction to illumination, Gouraud and Phong shading, antialiasing, texture mapping, and animation techniques. Three hours lecture per week. Three credit hours.

CPSC 3370 Net-centric Computing: Systems Concepts
Prerequisites: CPSC 2380 and CPSC 2382. Coverage of systems programming of net-centric computing systems. Hands-on experiences for students to learn how net-centric computing systems work and writing net-centric computing applications. Three hours lecture per week. Three credit hours.

CPSC 3371 Net-centric Computing: Language Concepts
Prerequisites: CPSC 2380 and CPSC 2382. Coverage of language design issues for net-centric computing systems. Hands-on experiences for students to learn and understand tradeoffs between applicable needs compared to language design and implementation issues. Three hours lecture per week. Three credit hours.

CPSC 3372 System Utilities
Prerequisites: CPSC 2376 or CPSC 2377. Job steps, file identification, program storage, data storage, cataloged procedures, libraries, utility programs. Three hours lecture. Three credit hours.

CPSC 3375 Database Concepts I
Prerequisites: CPSC 2380, MATH 2310. In-depth study of data models including E-R, EER, Relational, object relational, and other current models; Data language including relational algebra, relational calculus, SQL, and QBE; Database design including functional dependency and normalization; Database implementation using popular DBMSes; Application development using embedded SQL enhanced by web technology. Three hours lecture per week. Three credit hours.

CPSC 3380 Operating Systems
Prerequisites: CPSC 3370; MATH 1452 or equivalent. Buffering, physical input/output, and data management. Loaders, linkage editors, and relocation. Multiprogramming, scheduling resource allocation, and virtual memory. Three hours lecture per week. Three credit hours.

CPSC 3381 Enterprise COBOL Application Development
Prerequisites: CPSC 2376, CPSC 2377, or consent of the instructor. Accelerated programming in COBOL. Includes organization of COBOL program input, output, data manipulations, and tables, file organization, and file access methods. Subprogram, introduction to CICS programming. Three hours lecture per week. Three credit hours.

CPSC 3383 Language Structure
Prerequisites: CPSC 3371; MATH 2310. Concepts of syntax and semantics of grammars and languages. Study and comparison of the organization and major constructs of various programming language paradigms, with in-depth study of several specific languages. Implementation and compiler/interpreter-related issues. Three hours lecture. Three credit hours.

CPSC 3385 File Structures and Data Base Concepts
Prerequisites: CPSC 2380 and MATH 1452 or equivalent. In-depth study of sequential, indexed, and direct file structure; buffering, indexing; file systems; markup file structures including XML. Modern file representation including image files and sound files; Multimedia technology including CD-ROM, DVDs, and tape storage. Three hours lecture per week. Three credit hours.

CPSC 3386 Information Storage and Retrieval
Prerequisites: CPSC 2380, MATH 2310, 1452 or equivalent. The analysis of information content by statistical, syntactic, and logical methods. Search and matching techniques. Automatic retrieval systems, question answering systems. Evaluation of retrieval effectiveness. Three hours lecture per week. Three credit hours.

CPSC 3387 Simulation Methods
Prerequisites: CPSC 2380, STAT 3352 or equivalent, MATH 1452. Introduction to the design and analysis of discrete probabilistic systems using simulation. Basic concepts in modeling and analysis of both continuous and discrete systems are covered. Combined simulation methods, including integrated qualitative/quantitative system modeling. Emphasizes model construction and simulation language. Three hours lecture per week. Three credit hours.

CPSC 3391 Cooperative Education
Prerequisite: major in computer science, completion of the computer science freshman and sophomore core, and consent of department chairperson. Further work experiences to complement and extend the classroom learning experience through the application of theoretical concepts in a professional work environment. A minimum of 200 hours work with a participating employer. The exact number of work hours, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the Office of Cooperative Education. Three credit hours.

CPSC 3482 Computer Organization I

CPSC 4210 Computer Ethics
See IFSC 4210. Computer Ethics

CPSC 4370 Theory of Computation
Prerequisites: CPSC 3371, MATH 2310. A study of the main areas of theoretical computer science and their hierarchical interconnections. Basic results relating to formal models of computation, with emphasis on grammars and languages, finite automata, Turning machines, and computational complexity. Three hours lecture per week. Three credit hours.
CPSC 4371 Computer Documentation
Prerequisite: Senior standing in computer science and consent of instructor. The design and development of computer system documentation with emphasis on user documentation. Practical experience in writing a user manual using structured design methodology. Discussion of online documentation, hyperertext, and emerging documentation technologies. Three hours lecture per week. Three credit hours.

CPSC 4372 Object-oriented Programming
Prerequisite: working knowledge of a procedural programming language and UNIX operating system, or consent of the instructor. Concepts of object-oriented analysis, design, and implementation. Object-oriented programming in C++, Smalltalk, Java, and/or another current object-oriented programming language. Dual-listed in the UALR Graduate Catalog as CPSC 5372. Three hours lecture. Three credit hours.

CPSC 4373 Software Engineering
Prerequisites: CPSC 3370, CPSC 3375, and MATH 1452. Analysis of system requirements, software systems design techniques, software processes, software life-cycle models, software economics, configuration management, user interfaces, software testing and software maintenance. Students gain experience in the team approach to medium/large system development. Three hours lecture per week. Three credit hours.

CPSC 4375 Database Concepts II
Prerequisite: CPSC 3375 or equivalent. Advanced in-depth study of indexing, security, query processing, transactions; introduction to data warehousing; parallel and distributed databases. Three hours lecture per week. Three credit hours.

CPSC 4376 Applied Cryptography
Prerequisites: CPSC 2380, MATH 2310, and STAT 3352 or equivalents. A survey and study of the major cryptographic techniques, algorithms, and implementations, with emphasis on applications to communications and network security. Intended as a practical introduction to the current state-of-the-art of cryptographic usage. Dual-listed in the UALR Graduate Catalog as CPSC 5376. Three hours lecture. Three credit hours.

CPSC 4381 Computer Organization II
Prerequisite: CPSC 3482. Computer system design problems, such as arithmetic and non-arithmetic processing, memory uses, storage management, addressing, control, and I/O. Comparison of specific machines and their organizations. Three hours lecture per week. Three credit hours.

CPSC 4382 Compiler Construction and Theory
Prerequisites: CPSC 3371. Review of program language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Compile and run-time symbol tables, lexical scan, syntax scan, object code generation, error diagnostics, and optimization techniques. Introduction to precedence, context-free, and finite state grammars. Three hours lecture. Three credit hours.

CPSC 4383 Artificial Intelligence
Prerequisites: CPSC 3371, MATH 1452 and MATH 2310. Introduction to machine intelligence. Emphasis upon different paradigms for problem solving such as various state-space search strategies and other approaches. Exposure to one or more key areas such as robotics, logic programming, machine learning, expert systems, planning, neural networks, natural language processing, reasoning, under uncertainty, etc. Three hours lecture per week. Three credit hours.

CPSC 4384 Computer Networks
Prerequisites: CPSC 3370 and CPSC 3482. Network systems including transmission media, packet transmission, circuit / packet switching technology, LAN technologies and network topology, TCP/IP, internetworking, and network applications. Three hours lecture per week. Three credit hours.

CPSC 4387 Distributed Computing
Prerequisites: CPSC 3370. Network-based client/server computing. Topics include TCP/IP, object-oriented technology, distributed objects and their interfaces, JDBC, remote method invocation, CORBA, and web-based software system architecture.

CPSC 4388 Smart Software Systems
Prerequisite: CPSC 3375, MATH 1452. Study of the concept, design, and implementation of rule-based systems, agent-based systems, reasoning, reasoning under uncertainty; belief systems, explanation systems; knowledge representation, knowledge acquisition, and knowledge discovery; and application of knowledge engineering in technology. Three hours lecture per week. Three credit hours.

CPSC 4389 E-commerce: Analysis, Design, and Implementation
Prerequisites: CPSC 3371, 3375. E-commerce site analysis and design. Web-based system architecture, client/server computing, network protocols, software engineering for web-based systems, computer networks, web-based databases, script languages (Java, VB), XML, ASP, SQL, and DSN.

CPSC 4391 Cooperative Education
Prerequisites: major in computer science, CPSC 3391, and consent of department chairperson. Continuation of CPSC 3391. Work experiences to complement and extend the classroom learning experience through the application of theoretical concepts in a professional work environment. A minimum of 200 hours work with a participating employer. The exact number of work hours, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the Office of Cooperative Education. Three credit hours.

CPSC 4392 Capstone Project
Prerequisites: CPSC 3370, CPSC 3371, and either CPSC 4373 or consent of Game option advisor. Capstone course in which students individually design software system, document and present their conclusions. Students also develop a detailed undergraduate portfolio for a comprehensive review of their undergraduate work. Project work involves the development of design alternatives, development of an appropriate software architecture, and design and test the implemented system. The software design focuses on addressing overall design goals while understanding constraints of cost, etc. Deliverables and schedule are determined by the instructor. Three credit hours.

CPSC 4395, 4495, 4595 Internship
Prerequisites: senior standing in computer science, approval of assignment by advisor. Professional experience related to student’s discipline under supervision of advisor. Sixty hours work per credit hour. Three, four, or five credit hours.

CPSC 4399 Special Topics
Prerequisite: consent of instructor. Advanced topics in areas of current interest in computer science. Refer to the semester schedule for specific topics offered. Dual-listed in the UALR Graduate Catalog as CPSC 5399. Three hours lecture. Three credit hours.

CPSC 4100, 4200, 4300, 4400, 4500 Independent Study
Prerequisites: senior standing, at least 20 hours in computer science, consent of instructor. Designed for students who want to carry out special investigations. Topic and method of procedure must have approval of the supervising faculty member. Dual-listed in the UALR Graduate Catalog at the 5000-level. Sixty hours work per credit hour. One, two, three, four, or five credit hours.
Information Assurance

The minor and certificate program in information assurance (IA) is designed to provide students with the knowledge and capacity to implement information security and to solve information assurance problems. The program goals are to heighten awareness of information assurance in the academic community, prepare graduates who are capable of evaluating information assurance situations, and contribute to finding appropriate solutions to information assurance problems.

For students who currently hold degrees in areas other than information assurance, the program provides the environment to develop their knowledge and capacity for implementing information security and to do research in the area. It will also benefit students who wish to supplement their educations with knowledge of how to evaluate and improve the security of data from both technical and social perspectives.

Minor in Information Assurance

The IA minor is not limited to students in the Donaghey College of Information Science and Systems Engineering. In addition to students in computer-related programs such as Computer Science, Information Science, or Systems Engineering, the minor is also designed to include those with interests in Criminal Justice or Business Management who may not have extensive backgrounds in computers, math, or technology.

Certificate in Information Assurance

Students or working professionals who may or may not already have an undergraduate or graduate degree may elect to earn a Technical Certificate in Information Assurance. The requirements for certification are the same as the minor program. Note: This graded certificate does not replace traditional certification programs such as the Certified Information Systems Security Professional (CISSP) certification.

Application and Admission Requirements

Application materials, along with a description of the IA minor, may be obtained from the Computer Science Department, Donaghey College of Information Science and Systems Engineering, Dickinson Hall, Room 515, phone (501) 569-8130. To assure consideration of applications, check with the IA minor office for application deadlines.

To apply for this program, students must complete or have completed the following:

- RHET 1312 Composition II, or equivalent
- MATH 1302 College Algebra, MATH 1315 College Math, or equivalent
- Submission of a formal application.

Minor and/or Certificate in Information Assurance

The IA Minor and/or Technical Certificate in Information Assurance consists of 20 hours in seven courses. All courses must be completed with a grade of “C” or greater.

Students matriculating through colleges other than the College of Information Science and Systems Engineering (CISSE) will be approved for network and database courses in Business Management, unless written consent from instructors in CISSE courses is given.

Minor in Information Assurance Curriculum

<table>
<thead>
<tr>
<th>Required Prerequisite (3 hours)</th>
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<tbody>
<tr>
<td>IFAS 2300 Introduction to Information Assurance</td>
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<table>
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<tr>
<th>Core Courses (8 hours)</th>
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<tbody>
<tr>
<td>CRJU 3309 Cyber Crime and the Law</td>
</tr>
<tr>
<td>IFAS 3300 Computer Forensics</td>
</tr>
<tr>
<td>CPSC/IFSC 4210 Computer Ethics</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Computer Networking Course (3 hours)</th>
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<tbody>
<tr>
<td>MGMT 4310 Local Area Networks</td>
</tr>
<tr>
<td>IFSC 3315 Applied Networking</td>
</tr>
<tr>
<td>CPSC 4384 Computer Networks</td>
</tr>
<tr>
<td>or CPSC 3370 Net-centric Computing: Systems Concepts</td>
</tr>
<tr>
<td>SYEN 3332 Communication Networks</td>
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<table>
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<tr>
<th>Approved Elective (3 hours)</th>
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<tbody>
<tr>
<td>SYEN 3318 Decision and Risk Analysis</td>
</tr>
<tr>
<td>MGMT 4311 Advanced Network Technologies</td>
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<tr>
<td>IFSC 4339 Network Security</td>
</tr>
<tr>
<td>IFSC 4330 Database Security</td>
</tr>
<tr>
<td>IFSC 4310 Quantitative Analysis</td>
</tr>
<tr>
<td>CPSC 3380 Operating Systems</td>
</tr>
<tr>
<td>or CPSC 3370 Net-centric Computing: Systems Concepts</td>
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<tr>
<td>CPSC 4376 Applied Cryptography</td>
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Courses in Information Assurance (IFAS)

<table>
<thead>
<tr>
<th>IFAS 2300 Introduction to Information Assurance</th>
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<tr>
<td>Prerequisite: RHET 1312. Study of information security for roles as security professionals and business decision-makers. This course addresses knowledge areas of the Certified Information Systems Security Professional (CISSP) certification, including need for security, legal and ethical issues, risk management, security technologies and tools, and personnel security maintenance. Three hours lecture. Three credit hours.</td>
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<table>
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<tr>
<th>IFAS 3300 Computer Forensics</th>
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<tr>
<td>Prerequisite: IFAS 2300 and knowledge of Unix or Linux, as well as Windows operating systems. Study of the preservation, identification extraction, documentation, and interpretation of computer data following clear, well-defined methodologies and procedures. This course can be repeated for credit with a different theme. Three hours lecture. Three credit hours.</td>
</tr>
</tbody>
</table>

1. The certificate program is in the approval process. Contact the Information Assurance Program advisor for current information.

2. CPSC 3370 can be taken in place of CPSC 4384 or CPSC 3380 but not both.
DEPARTMENT OF CONSTRUCTION MANAGEMENT

Construction is our nation’s largest industry. It encompasses the residential sector, commercial and retail buildings, office and high-rise structures, major industrial and process complexes, and engineering projects such as highways, dams, bridges, and seaports. The complexity of projects demands that the professional constructor possess knowledge of the many aspects of the industry to effectively lead and manage the construction process.

UALR’s program in construction management provides a curriculum that equips the graduate for a wide range of managerial and supervisory roles within this multi-faceted, dynamic industry. Technological, computer, and software orientation assist our graduates to develop into contributing members of the construction industry with high paying entry-level jobs. There are substantial opportunities for rapid advancement and salary increases with experience in the industry. Career opportunities for our graduates can be found with general and specialty contractors, architectural and engineering firms, testing laboratories, government agencies, financial institutions, insurance and surety companies, and manufacturers of construction equipment and products. The courses provide an in-depth study of construction management, construction science, business, mathematics, and sciences. Extensive applications with construction computer software and hardware emphasize the most current technologies used by industry.

Admission Policy

After admission to UALR, any student may declare a major or minor in construction management. To discuss the extensive opportunities that exist in construction management, students should visit the construction management office in ETAS 105 or call (501) 569-8133. E-mail may be directed to the office at jmtramel@ualr.edu and faxes/mails sent to (501) 569-8341.

Bachelor of Science in Construction Management

The construction management program is an interdisciplinary baccalaureate degree program that builds upon construction methods, engineering techniques, and business courses offered in the Donaghey College of Information Science and Systems Engineering and the College of Business. The integrated curriculum provides a foundation for the capstone courses offered in the senior year and the required passage of the associate level of the Certified Professional Constructor exam. A minor is not required for the degree, but may be obtained within the College of Business.

Students seeking a bachelor of science in construction management must pass each construction management course with a grade of C or greater.

Students are required to complete a minimum of 800 contact hours of practical work experience in an approved construction-related activity. This stipulation provides the graduate with valuable industry experience and insights. Students are also required to complete a minimum of 120 contact hours of construction-related community service in conjunction with department faculty. This requirement allows the students a unique opportunity to combine coursework with worthwhile services to a diverse community.

Accreditation

The four-year baccalaureate, construction management program is fully accredited by the American Council for Construction Education (ACCE). The ACCE is recognized by the Council for Higher Education Accreditation as the national accrediting agency for four-year baccalaureate programs in construction education. Accreditation is a means for recognizing educational institutions that achieve and maintain a level of performance, integrity, and quality that entitles them to the confidence of the educational community and the public they serve. The UALR construction management program is the only such accredited program in the University of Arkansas system.

Student Activities

The UALR construction management program has five student chapters and one honor society for student involvement. The student chapters are affiliated with the Associated General Contractors, the Associated Builders and Contractors, the National Association of Home Builders, Construction Specification Institute, and the Forest Product Society. The Arkansas chapter of each association sponsors the student chapters and provides opportunities for students to interact and network with members of their organizations.

Special student membership is also available with the American Concrete Institute, American Society of Professional Estimators, National Association of Women in Construction, and the International Code Council.

Students who meet the requirements can become members of Sigma Lambda Chi, the International Honor Society for Leaders in Construction.

The UALR construction management program is a member of the Associated Schools of Construction and participates in its regional construction management competitions. Selected students can also compete in the sponsoring student chapter construction management competitions for ABC, AGC, NAHB, CSI, and FPS.

Minor in Construction Management

The minor in construction management is available to students majoring outside the Donaghey College of Information Science and Systems Engineering and provides a construction element to many major fields of study. Students are required to take CNMG 1301, 1305, 2310, 2312, 2314, 2332, 3342 and three hours of approved CNMG electives. Students seeking a minor in construction management must pass each construction management course with a grade of C or greater.
Bachelor of Science in Construction Management: Required Courses

First Semester (18 hours)
- CNMG 1301 The Construction Industry
- CNMG 1305 Drawings and Specifications
- ETME 1300 Computer Graphics
- MATH 1302 College Algebra
- MGMT 1310 Fundamentals of Information Technology
- RHET 1311 Composition I

Second Semester (16 hours)
- CNMG 2195 Service Learning
- CNMG 2310 Materials and Methods I
- CNMG 2312 Materials and Methods II
- MATH 1303 Trigonometry
- RHET 1312 Composition II
- HIST 2311 U.S. History to 1877, or HIST 2312 U.S. History since 1877, or POLS 1310 American National Government

Third Semester (16 hours)
- CNMG 2314 Service Systems of Buildings
- CNMG 2316 Construction Surveying
- MATH 1342 Business Calculus
- PHYS 1321I Elementary Physics I
- PHYS 1121I Elementary Physics I Laboratory
- SPCH 1300 Speech Communication

Fourth Semester (16 hours)
- CNMG 2323 Construction Administration
- CNMG 3333 Statics and Strength of Materials
- ACCT 2310 Principles of Accounting I
- ERSC 1302 Physical Geology
- ERSC 1102 Physical Geology Laboratory
- ENGL 2337 World Literature
  or ENGL 2338 World Literature Themes
  or PHIL 2320 Ethics and Society

Fifth Semester (16 hours)
- CNMG 3195 Community Service Projects
- CNMG 3322 Concrete Construction
- CNMG 3339 Bid Process
- CNMG 3347 Soils and Foundations
- CNMG 4370 Structural Steel Design
- MGMT 3352 Advanced Personal Computer Applications

Sixth Semester (17 hours)
- CNMG 3327 Field Operations
- CNMG 4311 Estimating
- MGMT 3380 Business Communication
- MKTG 2380 Legal Environment of Business
- HIST 1311 History of Civilization I, or HIST 1312 History of Civilization II
- ARHA 2200 Introduction to Visual Art
  or DRTH 2200 Introduction to Theatre and Dance
  or MUHL 2200 Introduction to Music

Seventh Semester (16 hours)
- CNMG 3342 Construction Safety
- CNMG 4195 Professional Service Development
- CNMG 4329 Construction Planning and Scheduling
- CNMG 4334 Construction Contracts and Law
- ECON 2301 Survey of Economics
- Approved Business Elective (3 hours)

Eighth Semester (15 hours)
- CNMG 4322 Building Structure Design
- CNMG 4345 Construction Management
- CNMG 4391 Cooperative Education
  or CNMG 4199, 4299, 4399 Special Topics in Construction
- ECON 4324 Environmental Economics
- MGMT 4391 Employment Law

Certificate in Construction Management
Students who are admitted into the University as a post-baccalaureate may elect to earn a Construction Management Certification. The requirements for certification include MGMT 3352 and a minimum of 24 credit hours in CNMG courses with a grade of C or greater.

Those with backgrounds outside the construction industry are required to take MGMT 3352 and CNMG 1301, 1305, 2310, 2312, 2314, 2323, 3339, 3342, 4311, 4329, and 4334, for a total of 36 credit hours.

Courses in Construction Management (CNMG)

CNMG 1301 The Construction Industry
Introduction to the construction industry and the career opportunities available within residential, building, heavy civil, and industrial construction. The different roles of the various participants are examined along with industry history and traditions. Proper dress and safety requirements for office and field site visits discussed. Includes guest speakers, field trips, and project site visits. Two hour lecture, two hours lab. Three credit hours.

CNMG 1305 Drawings and Specifications
Prerequisite or corequisite: ETME 1300 or consent of instructor. Introduction to basic construction drawings and specification interpretation. Emphasis on construction drawings and blueprint reading, CSI specifications and master format, project manual, shop drawings, as-built drawings, and proper construction terminology. Two hours lecture, two hours lab. Three credit hours.

CNMG 2195 Service Learning
Prerequisites: CNMG 2316 or consent of the instructor. A construction-related labor experience in assigned community service projects. Faculty provide site safety instruction, proper tool usage, construction methods, and arrange for specialty contractors to conduct hands-on training when necessary. A minimum of 40 hours of documented work is required. Two hours lab. One credit hour.

CNMG 2310 Construction Surveying
Prerequisite: CNMG 2310 and MATH 1303, or consent of instructor. Introduction to the principles of construction surveying, project layout, and field performance and surveying equipment management. Topics will include use and care of

Students with documented construction industry experience are required to meet with a program advisor to determine the number of prerequisite courses needed in order to take CNMG 4311, 4329, 4334, and MGMT 3352. Once the prerequisite courses have been determined, the student may select the remaining CNMG courses needed to complete the required 21 credit hours. Upon completion of the required courses the program issues a Construction Management Certification to the student.
Prerequisites: CNMG 2312, 2314, 2316, and SPCH 1300, or consent of instructor. 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. Three hours lecture; Three credit hours.

Prerequisites: CNMG 3347 or consent of the instructor. Laboratory testing of rocks and soils, identification and index property tests, permeability tests, moisture density expansion relationships, unconfined and triaxial compression tests, and consolidation and expansion of soils. One three-hour lab. One credit hour.

Prerequisites: CNMG 2316, 2195, and consent of instructor. Under the guidance of faculty members, students provide labor and site supervision for an assigned community service project. A minimum of 40 hours of documented labor and supervision is required. Two hours lab. One credit hour.

Prerequisites: CNMG 3322 or consent of instructor. Provides an in-depth examination of the principles and applications of concrete construction. Study of process of placing ready mix concrete from batching to curing along with the theory, equipment depreciation, earth moving fundamentals, ownership and operating cost, and equipment selection and usage. Two hours lecture, two hours lab. Three credit hours.

Prerequisites: CNMG 3333 or consent of instructor. Introduction to the principles and physical concepts of statics and strength of materials related to construction. Two hours lecture, two hours lab. Three credit hours.

Prerequisites: CNMG 2316 and CNMG 2322 or consent of the instructor. Theory and practice of construction project bidding and estimating. Topics include proposal solicitation and preparation, bidding strategy, estimate types and content, quantity survey, ethics, and an introduction to computer use in estimating. Three hours lecture. Three credit hours.

Prerequisites: CNMG 3333 or the consent of instructor. A study of the principles of construction safety and 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. Three hours lecture. Three credit hours.

Prerequisites: CNMG 3333, or consent of instructor. Introduction to structural foundation types and design, use of soil mechanics technology, techniques for moisture control and drainage, construction considerations, subsurface exploration, retaining structures, sheet pile walls, pile and drilled pier foundations, reinforced earth, and soil reinforcement. Two hours lecture, two hours lab. Three credit hours.

Prerequisites: CNMG 3195 and 4311 or consent of instructor. Students acts as a construction or project manager and control a community service project through the planning, design, bidding, construction, and close-out phases. A minimum of 40 hours of documented construction or project management is required. Two hours lab. One credit hour.

CNMG 4100, 4200, 4300 Independent Study
Prerequisite: declared major in construction management with 60 hours completed toward degree. Topic and method of procedure must have approval of the supervising faculty member. 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 is agreed on in advance by the student and the instructor. With approval, may be repeated for up to six hours of credit toward the construction management major. One, two, or three credit hours.

CNMG 4311 Estimating
Prerequisites: CNMG 3333 and MGMT 3352, or consent of instructor. Prerequisite or corequisite: CNMG 3322 or consent of instructor. Advanced applications and concepts of construction project estimating. Topics include computer aided 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. Two hours lecture, two hours lab. Three credit hours.

CNMG 4321 Reinforced Concrete Design
Prerequisite: CNMG 3333 or consent of instructor. Behavior and design of reinforced concrete elements by ultimate strength design; fundamentals of pre-stressed concrete. Three hours lecture. Three credit hours.

CNMG 4322 Building Structure Design
Prerequisite: CNMG 4311 or consent of instructor. Introduction to building structure design for construction management students. Study of service and live loads for structural steel, wood, reinforced concrete, and masonry building materials are investigated through computation and project work. Two hours lecture and two hours lab. Three credit hours.

CNMG 4329 Construction Planning and Scheduling
Prerequisite: CNMG 4311 or consent of instructor. 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 a primary focus on Primavera. Two hours lecture and two hours lab. Three credit hours.

CNMG 4334 Construction Contracts and Law
Prerequisites: CNMG 4311 and MKTG 2380, or consent of instructor. A study of construction contracts in relation to project delivery systems and the basic principles of construction law. Case studies are used to analyze selected areas that affect the construction process. Topics include standard agreements and conditions, negligence, risk, indemnities, modifications, mechanics’ lien, claims, dispute resolution, conflicts of interest, ethical consideration, and labor law. Three hours lecture. Three credit hours.

CNMG 4345 Construction Management
Prerequisites: CNMG 3342, 4329, 4334, SPCH 3320, and consent of instructor. A capstone course. Students develop and organize construction companies. Project contracts are awarded and construction administration is required. One hour lecture, four hours lab. Three credit hours.

CNMG 4370 Structural Steel Design
Prerequisite: CNMG 3333 or consent of instructor. Methods of analysis and design of structural steel buildings, including tension members, columns, and bending members. Design of plate girders, composite design, and connections. Uses the AISC Manual of Steel Construction and the specification for the Design, Fabrication and Erection of Structural Steel for Buildings, latest edition. Three hours lecture; Three credit hours.

CNMG 4391 Cooperative Education
Prerequisites: declared major in construction management with 75 hours completed toward degree; cumulative GPA of 2.50; approval of assignment by construction management director. Requires at least 400 contact hours on the job. Three credit hours.

CNMG 4395 Professional Development
Prerequisites: senior standing in construction management and consent of instructor. Partnerships between students and nonprofit community organizations will be established. Students use skills in construction management to assist with construction-related projects. A minimum of 120 hours of work is required along with progress reports and presentations. Three credit hours.

CNMG 4199, 4299, 4399 Special Topics in Construction
Prerequisites: consent of instructor based on relevance of subject matter to student career goals. Designed to meet special needs of students or industry to cover application of construction management to specific problems. Meets equivalent of one hour per week for each credit hour value. May be taken more than once for credit. One, two, or three credit hours.
Engineering Technology Degrees' Educational Objectives

The Electronics and Computer Engineering Technology and Mechanical Engineering Technology degrees, consistent with the mission of the university and college, provide holistic educational training in engineering technology specialties and prepare the graduates for entry-level positions in industry. The content, depth, and structure of the engineering technology curricula at UALR will also instill a desire in graduates to pursue further learning. The department involves the faculty, student body, university and college administration, and industry representatives to design, modify, and upgrade the curricula to serve the changing needs of its constituencies.

Engineering Technology Programs' Outcomes

Upon completion of the degree requirements, the UALR Engineering Technology graduates will:

- attain mastery of practical knowledge in electronics and computer, and mechanical components and systems;
- comprehend the relationship and connection between the principles of math and physical sciences and their applications in electronics and mechanical world;
- develop abilities and skills to work with hardware, conduct experiments, and analyze and interpret the data;
- develop verbal and written communication skills and document and present the results from laboratory assignments and independent research;
- learn to work together in teams, listen to others’ point of view, respect individual responsibility, and understand the team dynamics;
- learn skills to solve technical problems with multidimensions and come up with solutions for open ended problems;
- understand the obligations of individual to other students, student bodies, professional societies, and community;
- understand how technology could accommodate the diversity in human nature and address the diverse needs of local and global societies; and
- recognize that the undergraduate in engineering technology is a start and that further training and education will advance their careers and intellectual growth.

These program outcomes are in alignment with the Criterion 2 of the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, November 1, 2004.

Student Professional Societies:

Several opportunities exist for students to interact with peers through student chapters of professional societies such as the Institute of electrical and Electronics Engineers (IEEE), American Society of mechanical engineers (ASME), society for women Engineers (SWE), and Tau Alpha Pi, and honor society of engineering technology. The Industrial Advisory Council of Engineering Technology consists member from local industry and provides excellent interaction with industry for students and faculty.
Minor in Engineering Technology
The minor in engineering technology provides technical education for the job market and personal enrichment. The program requires at least 21 credit hours in the department to include the courses ETME 1300 and 3317, and ECET 1404, 2100, and 2150. Nine hours of electives, including at least six hours of upper-level courses, are required. All minor field electives must be approved by a faculty advisor in the department.

Minor in Computer Integrated Manufacturing
The minor in computer integrated manufacturing requires at least 22 credit hours. The program must include ETME 1300, 2317, 2117, 3328, 3312, 3330, and 4385, and three hours of an approved technical elective.

Biomedical Instrumentation
The department cooperates with the College of Health Related Professions at UAMS in providing course work for students enrolled in that college’s program.

For specific details of the courses, contact the Department of Engineering Technology.

FAA’s Airway Facilities Collegiate Training
The electronics and computer engineering technology program is an approved site for the Federal Aviation Administration’s (FAA) Airway Facilities Collegiate Training Initiative (AF-CTI). Students selected to participate in the FAA initiative pursue the associate degree program in electronics and computer engineering technology and are required to pass a Basic Electronics Screening Tool (BEST) Test before being hired. For more details, contact the program coordinator of electronics and computer engineering technology.

Electronics and Computer Engineering Technology Program
Professor H. C. Patanga, coordinator.

The field of electronics and computer technology extends over a wide spectrum of modern applications where knowledge of both electronics and computer hardware/software are equally important. It is essential for many modern industries that graduates work comfortably across the boundaries of both electronics and computers. This curriculum offers a single, unified bachelor’s degree program in electronics and computer engineering technology to prepare students to take on the technological challenges of the 21st century. It provides a strong and comprehensive foundation in both areas, and technical electives are available for students to concentrate in either or both fields depending on their interests.

The curriculum requires that students develop a strong background in mathematics, science, and communication skills. In addition, students must master a progressively involved sequence of technical courses that instill a knowledge of theory, analysis, and practical design. The heavy laboratory emphasis with modern and industry standard equipment provides extensive hands-on experience in a variety of fields including analog and digital electronics, computer networks and systems, microprocessors, telecommunications, embedded systems, robotics, PLCs, industrial control, and signal processing.

The electronics and computer engineering technology program enjoys strong support of the industrial community, and an industrial program advisory board provides periodic input to make changes in program offerings to reflect the changing needs of industries. Local companies provide cooperative education assignments for students to receive meaningful industrial experience while earning both academic credit and income to defray their educational expenses.

The current bachelor’s degree programs in electronics and computer engineering technology are both accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology1 (TAC/ABET). The department also offers the TAC/ABET accredited associate degree in electronics engineering technology.

The Electronics and Computer Engineering Technology (ECET) degree program at UALR adheres to the TAC/ABET guidelines for program educational objectives. In particular, the following program goals have been established for the ECET degree:

- The graduates will have a solid base of electronics and computer engineering knowledge.
- The program will provide a spectrum of knowledge base to graduates in electronic circuits and devices, analog and digital systems, communication systems, industrial control, computer software, and hardware/software integration.
- The program will maintain a high level of academic rigor throughout the program ladder to ensure graduates engage in independent learning and possess high quality thinking skills.
- All graduates must demonstrate good writing and verbal communication skills.
- The graduates will possess the training and maturity to be effective team members.

Associate of Science Degree
This degree requires two years of study of electronics, computers, science, mathematics, and general academics to prepare students for employment as electronics technicians. Graduates of the program can also transfer their credits toward the bachelor of science degree in electronics and computer engineering technology. Two additional years of study are required to meet the requirements for the baccalaureate degree.

Bachelor of Science Degree
The baccalaureate degree program requires the students to complete two additional years beyond the associate of science curriculum. Students receive greater depth and breadth of knowledge in the technical field and many mathematics, humanities, and social science courses are included. A number of technical electives are allowed in the curriculum, and students choose the electives to match their career objectives. No minor is required for the degree.

AS in Electronics and Computer Engineering Technology Curriculum

First Semester (17 hours)
IFSC 1201 Enterprise Information Science I
ECET 1302 Introductory Experience in Technology and Computers
RHET 1311 Composition I
MATH 1302 College Algebra
HIST 2311, 2312 American History or POLS 1310 American National Government
SPCH 1300 Speech Communication

Second Semester (15 hours)
RHET 1312 Composition II
MATH 1303 Trigonometry
ECET 1404 Circuit Analysis I
IFSC 1202 Enterprise Information Science II
ETME 1300 Computer Graphics

Third Semester (17 hours)
MATH 1311 Applied Calculus I
PHYS 1321 Elementary Physics I
PHYS 1121 Elementary Physics I Laboratory
ECET 2300 Numerical Methods for Technologists
ECET 2305 Circuit Analysis II
ECET 2105 Circuits and Simulation Laboratory
RHET 3316 Writing for the Workplace or RHET 3326 Technical Writing or MGMT 3380 Business Communication

Fourth Semester (17 hours)
ECET 2352 Introduction to Digital Systems
ECET 2152 Introductory Digital Laboratory
PHYS 1322 Elementary Physics II
PHYS 1122 Elementary Physics II Laboratory
ECET 2150 Microprocessor Fundamentals
ECET 2169 Sophomore Design Project
ECET 3308 Robotics and PLCs
ECET 3405 Electronic Devices I

1. The TAC/ABET office is at 111 Market Place, Suite 1051 Baltimore, MD 21202, (410) 347-7700.
Bachelor of Science in Electronics and Computer Engineering Technology

First Semester (17 hours)
IFSC 1201 Enterprise Information Science I
ECET 1302 Introductory Experience in Technology and Computers
RHET 1311 Composition I
MATH 1302 College Algebra
HIST 2311, 2312 American History or POLS 1310 American National Government
SPCH 1300 Speech Communication

Second Semester (15 hours)
RHET 1312 Composition II
MATH 1303 Trigonometry
ECET 1404 Circuit Analysis I
IFSC 1202 Enterprise Information Science II
ETME 1300 Computer Graphics

Third Semester (17 hours)
MATH 1311 Applied Calculus I
PHYS 1321 Elementary Physics I
PHYS 1121 Elementary Physics I Laboratory
ECET 2300 Numerical Methods for Technologists
ECET 2305 Circuit Analysis II
ECET 2105 Circuits and Simulation Laboratory
RHET 3316 Writing for the Workplace or RHET 3326 Technical Writing or
ECET 2105 Circuits and Simulation Laboratory
ECET 2169 Sophomore Design Project
ECET 2150 Microprocessor Fundamentals
ECET 2291 Cooperative Education
ECET 2191 Cooperative Education

Fourth Semester (17 hours)
ECET 2352 Introduction to Digital Systems
ECET 2152 Introductory Digital Laboratory
PHYS 1322 Elementary Physics II
PHYS 1122 Elementary Physics II Laboratory
ECET 2150 Microprocessor Fundamentals
ECET 2169 Sophomore Design Project
ECET 3308 Robotics and PLCs
ECET 3405 Electronic Devices I

Fifth Semester (17 hours)
CPSC 2376 Advanced Computer Programming
MATH 1312 Applied Calculus II
ECET 3406 Electronic Devices II
ECET 3350 Microprocessor Systems
ECET 4407 Digital System Design

Sixth Semester (16 hours)
ECET 4450 Embedded Systems
ECET 3360 Data Acquisition and Sensors
ECET 3409 Applied Transform Methods
Art/Music/Theatre Core Requirement
PHIL 2320 Ethics and Society

Seventh Semester (16 hours)
ECET 4351 System Design
ECET 4304 Industrial Controls
ECET 4479 Communication Systems
Approved Technical Elective 1 (3 hours)

Eightth Semester (15 hours)
ECET 4306 Data and Computer Communications
ECET 4370 Senior Design
Approved Technical Elective 1 (3 hours)
Upper Level Humanities, Arts, or Social Sciences (3 hours)
HIST 1311 History of Civilization I or HIST 1312 History of Civilization II

1. Technical electives to be approved by the faculty advisor.
ECET 3191 Cooperative Education
Prerequisite: junior standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50, minimum GPA of 2.30 for previous semester. Industrial experience under supervision of advisor to supplement course work. Students who take this course may not take 3291. Requires at least 240 contact hours on the job. One credit hour.

ECET 3291 Cooperative Education
Prerequisite: junior standing in engineering technology and approval of chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester. Work experience related to student objectives under supervision of advisor. Students who take this course may not take 3191. Requires at least 480 contact hours on the job. Two credit hours.

ECET 3300 Independent Study
Prerequisite: consent of instructor. Study of assigned topics chosen to develop investigative, analytical, research, or professional skills related to engineering. The student is expected to spend 8 to 10 hours per week on the project. The exact hourly commitment depends on the complexity of the project and is agreed to in advance by the student and the instructor. Three credit hours.

ECET 3308 Robotics and Programmable Logic Controllers (PLCs)
Prerequisite: grade of C or greater in ECET 1404 or 2405. A study of operation of PLC’s, including ladder logic programming and interfacing to industrial-type equipment, such as motors. Programming topics include bit addressing, timers, counters, and switches. The application of PLC’s for robotic control will be examined. Two hours lecture, three hours lab. Three credit hours.

ECET 3316 Power Systems and Equipment
Prerequisites: grades of C or greater in ECET 2303, MATH 1311. Basic principles of AC power systems analysis, with emphasis on three-phase systems. Load and fault analysis and economic operation. Major equipment items, including motors, generators, transformers, and switching and control equipment. Two hours lecture, two hours lab and recitation. Three credit hours.

ECET 3350 Microprocessor Systems
Prerequisite: a grade of C or greater in CPSC 2382 or ECET 2150. Survey of addressing modes and instructions. Some hardware is introduced and electronic signals are related to software statements. Three hours lecture. Three credit hours.

ECET 3360 Data Acquisition and Sensors
Prerequisite: grades of C or greater in ECET 2300, 2352, and 3404; or consent of instructor. A practice-oriented course emphasizes the use of sensors in instrumentation and control and provides an understanding of the techniques of acquisition and manipulation of experimental and sensory data using computer hardware and software to build a coordinated and optimal automated system. Principles of process control using personal computers to provide an inexpensive solution for isolated or small-scale industrial process control are also discussed. Two hours lecture, three hours lab. Three credit hours.

ECET 3405 Electronic Devices I
Requisites: grades of C or greater in ECET 2305 and 2105. A study of the characteristics and applications of electronic elements including diodes, BJTs, and op-amps. Includes load lines, biasing techniques, single and multistage signal amplifiers, power amplifiers, and transistor switching characteristics. Laboratory exercise also includes computer simulation. Three hours lecture, three hours lab. Four credit hours.

ECET 3406 Electronic Devices II
Prerequisite: a grade of C or greater in ECET 3405. A detailed study of the operational amplifier, including gain considerations and frequency response. Selected applications of the op-amp to instrumentation, control, and active filters; computer-aided analysis is fully integrated into all topics. Other topics include oscillators and timing circuits. Three hours lecture, three hours lab. Four credit hours.

ECET 3409 Applied Transform Methods
Prerequisites: grades of C or greater in ECET 3406 and MATH 1312. Laplace transform method applied to network analysis, filters, and feedback systems. Fourier series and Fourier transform techniques with application to communication signals. Introduction to Z transform for digital signal processing. The laboratory projects include computer simulation using Matlab. Three hours lecture, three hours lab. Four credit hours.

ECET 4199 Special Technical Topics I
Prerequisite: consent of instructor based on relevance of subject matter to student career goals. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Meets equivalent of one hour. One credit hour.

ECET 4304 Industrial Controls
Prerequisites: a grade of C or greater in ECET 4407. A detailed study of industrial controls based around microcontrollers. Practical applications are emphasized. Topics include interface devices, such as opto-isolators and solid state relays. Two hours lecture, three hours lab. Three credit hours.

ECET 4306 Data and Computer Communications
Prerequisite: a grade of C or greater in ECET 3409. Discusses principles and practices in data communications with emphasis on the hardware aspects of data communication. Topics include the transmission, encoding, decoding, data interfacing, error detection and correction, link control, networking and protocols. Internetworking over the internet. Three hours of lecture. Three credit hours.

ECET 4309 Applied Signal Processing
Prerequisite: grade of C or greater in ECET 3409. A hands-on experience to digital signal processing, through laboratory exercises in a computer environment. Sampling theorem, discrete-time signals and systems, DFT, FFT, and digital filters. Two hours of lecture and two hours lab. Three credit hours.

ECET 4351 System Design
Prerequisites: grades of C or greater in ECET 3409 and 4450, or consent of instructor. Methods of approaching design problems, software control of hardware, modeling of applications, hardware/software trade-offs in the design process. Students work in teams to solve a substantive design problem. The course integrates at the system level the hardware/software knowledge of the electronics and computer engineering technology major. Three hours lecture. Three credit hours.

ECET 4353 Optical Electronic Devices and Systems
Prerequisites: grades of C or greater in ECET 3406 and 4407. Applications of optoelectronic devices to communications, robotics, and automated manufacturing. Two hours lecture and two hours lab. Three credit hours.

ECET 4354 Computer Hardware Architecture
Prerequisites: grades of C or greater in ECET 3350, 4407. Study of the various hardware designs and their relationship to architecture. Includes an overview of mainframe, supercomputers, and multicomputers. Three hours lecture. Three credit hours.

ECET 4362 Real-Time Systems
Prerequisites: grades of C or greater in ECET 3350 and CPSC 2376 or equivalents. Real-time specification and design techniques, real-time kernels, intertask communication and synchronization, real-time memory management, system performance analysis and optimization. Three hours lecture. Three credit hours.

ECET 4363 Network Technology and Management
Prerequisite: grade of C or greater in ECET 4306. A continuation of the study of the principles and practices in data communication and includes topics such as switches and switching fabric, frame relay, ATM, and emerging technologies. Protocols and techniques for monitoring and managing computer networks, and computer security issues are discussed. Two hours lecture and two hours lab. Three credit hours.

ECET 4370 Senior Design Project
Prerequisite: grade of C or greater in ECET 4351. Students work independently with a faculty mentor on a design/research problem. The project could be developed through industry collaboration, faculty research, or at the student’s own initiative through literature search. The project requires electronics and computer engineering technology faculty approval, formal oral and written presentation, and demonstration of the project. Students meet with the mentor weekly to discuss their designs. Five hours lab. Three credit hours.

ECET 4399 Special Technical Topics II
Prerequisite: consent of instructor based on relevance of subject to student career goals. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Meets equivalent of three hours. Three credit hours.

ECET 4407 Digital System Design
Prerequisites: grades of C or greater in ECET 2300, 2352, 2152, and 3405. Advanced concepts in digital system design to include programmable devices, and state machines using HDL. Laboratory projects include computer simulation. Three hours lecture, three hours lab. Four credit hours.

ECET 4450 Embedded Systems
Prerequisites: grades of C or greater in ECET 3350 and 4407. Techniques for interfacing micros to outside devices. Detailed analysis of bus standards, serial and parallel input/output to peripherals. Laboratory includes the application of interfacing techniques to build a microcomputer and interface it to outside devices. Three hours lecture, three hours lab. Four credit hours.

ECET 4479 Communication Systems
Prerequisites: grades of C or greater in ECET 3406 and 3409. Spectral analysis of signals; noise; linear modulation and demodulation; AM, SSB, angle modulation and demodulation; phase locked loops, and digital communication techniques. Three hours lecture, three hours lab. Four credit hours.

ECET 4480 Digital Communication
Prerequisite: a grade of C or greater in ECET 4479. Advanced study of techniques and hardware employed in digital, microwave, satellite, and fiber optic communications. Three hours lecture, three hours lab. Four credit hours.
Mechanical Engineering Technology Program

A ssociate Professor George Tebbetts, coordinator.

Leadership in corporate America is projected to come from the ranks of technologists who have the breadth of knowledge of design, manufacturing technology, and management skills. UALR’s mechanical engineering technology program provides a strong and comprehensive foundation in these areas and introduces to students the ideas of fabrication processes, management of people and projects, and cost and quality control. The program focuses on fundamental concepts of statics, dynamics, mechanics of materials, and computer two- and three-dimensional graphics of components. The degree program emphasizes product development, design, manufacturing, design of mechanical systems such as thermal power systems, heating, ventilating and air conditioning, and addresses the area of plastics and composites.

The program prepares students for entry-level positions in a variety of career areas in product design, testing, manufacturing, and in plant design and operation. Technical knowledge in the mechanical field is based upon a broad foundation in mathematics, science, and applied science. The program emphasizes applications and extensive hands-on experience in addition to theoretical concepts. In addition to the traditional approach to mechanical design and manufacturing, the program emphasizes computer applications such as computer-aided manufacturing, computer-aided engineering, data acquisition and sensors, robotics, and programmable logic controllers.

UALR’s mechanical engineering technology program enjoys a strong support from the industrial community and has a successful cooperative education program with a number of local industries. The cooperative education program allows students to practice in industry, gaining early experience while earning academic credit and income to help with their educational expenses. Students may enroll in the co-op program beginning in their junior year.

The department offers both a two-year associate and four-year bachelor’s degree program. Both are accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

The Mechanical Engineering Technology (MET) degree program at UALR adheres to the TAC/ABET guidelines for program educational objectives. The MET program has following program specific educational objectives:

- The graduates will acquire knowledge and skills to conceive, analyze, manufacture, test, and provide integrated design solutions for mechanical components and systems of practical nature.
- The graduates will receive analytical and hands on skills in the focus areas of mechanical design, fluid power and thermal systems, manufacturing, planning, and control, and engineering materials’ processes and applications.
- The graduates will develop competency to communicate technical problem solutions in verbal, written, and graphical form.
- The graduates will gain appreciation to professional ethics, interpersonal and social skills, and be able to function in teams effectively, and
- The graduates will maintain technical currency in mechanical technology and develop a desire to pursue learning further.

Minor in Computer Integrated Manufacturing

Required Courses

- ETME 1300 Computer Graphics
- ETME 2317 Manufacturing Processes
- ETME 2117 Manufacturing Processes Laboratory
- ETME 3312 Production Systems
- ETME 3328 Computer Aided Manufacturing (CAM)
- ETME 3330 Quality Control
- ETME 4385 Robotics and Automation

Approved technical elective\(^1\) (3 hours)

\(^1\) Approved technical electives include: ETME 3191, 3291, 3305, 3318, \(3322\), and 4385

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Associate of Science Curriculum

First Semester (17 hours)

- IFSC 1201 Enterprise Information Science I
- ECET 1302 Introductory Experience in Technology and Computers
- MATH 1302 College Algebra
- RHET 1311 Composition I
- HIST 2311, 2312 American History or POLS 1310 American National Government
- SPCH 1300 Speech Communication

Second Semester (15 hours)

- ETME 1300 Computer Graphics
- IFSC 1202 Enterprise Information Science II
- ECET 1404 Circuit Analysis I
- RHET 1312 Composition II
- MATH 1303 Trigonometry

Third Semester (16 hours)

- ETME 2303 Computer Aided Design
- ETME 2302 Properties of Materials
- ETME 3317 Statics and Dynamics
- PHYS 1321 Elementary Physics I
- PHYS 1121 Elementary Physics Lab I
- MATH 1311 Applied Calculus I

Fourth Semester (17 hours)

- ETME 2333 Advanced Computer-Aided Design
- ECET 3308 Robotics and PLCs
- ETME 2317 Manufacturing Processes
- ETME 2117 Manufacturing Processes Lab
- ETME 2320 Fluid Power
- PHYS 1322 Elementary Physics II
- PHYS 1122 Elementary Physics II Laboratory

Associate of Science Degree

The associate of science is a two-year degree program which provides students with the background and skill for supporting level positions in the mechanical and manufacturing fields. These include computer graphics, computer aided manufacturing, and CNC programming, fluid power, technical sales, and plant maintenance.

The curriculum requires students to take courses in mechanical, manufacturing, and electronics and computer engineering technology in addition to mathematics, science, and general education. Students must complete the associate degree program before they are allowed to enroll in the baccalaureate program.

The associate degree in mechanical engineering technology majors may take only up to nine credit hours of junior and senior level courses in the program. Associate degree graduates may transfer their credits toward the bachelor’s degree in mechanical engineering technology.

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Bachelor of Science Curriculum

Fifth Semester (16 hours)
- ETME 3324 Plastics and Composites
- ETME 3312 Production Systems
- ETME 3303 Applied Thermal Science
- CHEM 1402 General Chemistry I
- MATH 1312 Applied Calculus II

Sixth Semester (17 hours)
- ETME 3361 Cost Analysis and Estimation
- ETME 3315 Thermal Systems Design
- ETME 3328 Computer Aided Manufacturing
- ETME 3301 Applied Mechanics of Materials
- RHET 3216 Writing for the Workplace or RHET 3326 Technical Writing or MGMT 3380 Business Communication

Seventh Semester (16 hours)
- ETME 4317 Machine Design
- ETME 4321 Computer Aided Engineering
- ETME 4187 Senior Project I
- HIST 1311 History of Civilization I or HIST 1312 History of Civilization II
- ETME 3311 Mechanical Instrumentation
- PHIL 2320 Ethics and Society

Eighth Semester (15 hours)
- ETME 4387 Senior Project II
- ETME 3330 Quality Control
- Technical Elective
- Individuals, cultures, and societies core curriculum requirement
- Upper Level Humanities, Arts, or Social Sciences

Bachelor of Science Degree

The baccalaureate degree program requires the students to complete two additional years beyond the associate of science curriculum. No minor is required for the degree.

Students receive greater depth and breadth of knowledge in the mechanical field, and take additional courses in mathematics, science, humanities, and social science. Students choose technical electives to meet their career goals.

The bachelor of science curriculum requires completion of the associate degree curriculum detailed in the chart above and the requirements detailed in the chart above.

Courses in Mechanical Engineering Technology (ETME)

ETME 1110 Introduction to Mechanical Engineering Technology
- Review of educational goals, role, and practice of mechanical engineering technology.
- Career path in design, manufacturing planning, plant engineering, and plant management.
- Planning educational and experience goals, including cooperative education; licensing and certification.
- One hour lecture. One credit hour.

ETME 1300 Computer Graphics
- Study of graphics and the types of engineering drawings used in design.
- Sketching and computer aided design tools are used to create the various types of views needed for design and documentation.
- Two hours lecture and three hours lab. Three credit hours.

ETME 2117 Manufacturing Processes Laboratory
- Prerequisite or corequisite: ETME 2317. Introduction to machine shop equipment and work safety; metal fabricating projects, including metal cutting, such as turning, drilling, and milling.
- Measurement and inspection, welding and assembly. One three-hour lab. One credit hour.

ETME 2191 Cooperative Education
- Required: sophomore standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester.
- Industrial experience under supervision of faculty advisor to supplement course work.
- Students who take this course may not take 2291.
- Requires at least 480 contact hours on the job. One credit hour.

ETME 2291 Cooperative Education
- Prerequisites: sophomore standing and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester.
- Industrial experience under supervision of advisor to supplement course work.
- Students who take this course may not take 2191.
- Requires at least 480 contact hours on the job. Two credit hours.

ETME 2302 Properties of Materials
- Prerequisites: sophomore standing and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester.
- Industrial experience under supervision of advisor to supplement course work.
- Students who take this course may not take 2191.
- Requires at least 480 contact hours on the job. Two credit hours.

ETME 2303 Computer-Aided Design (CAD)
- Prerequisites: A grade of C or greater in ETME 1300 and basic computer skills, or consent of instructor.
- A study of 2D and 3D computer aided design software used in industry.
- Detailed and working drawings, and design documentation using CAD. Importing and exporting CAD data is covered as well as various methods of output. Introduction to 3D modeling.
- Two hours lecture, three hours lab. Three credit hours.

ETME 2310 Applied Statics
- Corequisite: MATH 1311.
- An analysis of force systems applied to rigid bodies at rest.
- Application of principles of computation of reactions, shears, moments, and forces for simple structures. Centroids and moments of inertia are included.
- Two hours lecture, two hours lab. Three credit hours.

ETME 2317 Manufacturing Processes
- Traditional manufacturing processes such as casting, forging, cold working; metal removal processes such as turning, milling, drilling, finishing processes, metal joining, and plastics.
- Manufacturing process laboratory course is available. Three hours lecture. Three credit hours.

ETME 2320 Fluid Mechanics and Power
- Prerequisite: A grade of C or greater in MATH 1303.
- Hydraulics and pneumatics, the flow of water, air, and oil; calibration of metering devices; pipe friction; elementary hydraulic tests; friction and energy loss; and devices for making fluid measurements.
- Two hours lecture, two hours lab. Three credit hours.

ETME 2333 Advanced Computer-Aided Design
- Prerequisites: A grade of C or greater in ETME 2303, or consent of instructor.
- Graphic design process using an interactive computer-aided design system.
- Includes sophisticated functions beyond two-dimensional shape and size description and three-dimensional capabilities of CAD/CAM systems in advanced design situations.
- Calculation and analysis programs are used to improve the students’ design. Students work on design problems related to their chosen field using the CAD system.
- Two hours lecture, three hours lab. Three credit hours.

ETME 3191 Cooperative Education
- Prerequisites: junior standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester.
- Industrial experience under supervision of advisor to supplement course work. Students who take this course may not take 3291.
- Requires at least 480 contact hours on the job. One credit hour.

ETME 3291 Cooperative Education
- Prerequisites: junior standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester.
- Work experience related to student objectives under supervision of advisor. Students who take this course may not take 3191.
- Requires at least 480 contact hours on the job. Two credit hours.

The student spends 8 to 10 hours per week on the project. The exact hourly commitment depends on the complexity of the project and is agreed on in advance by the student and the instructor. Three credit hours.

1. Approved technical electives include: ETME 3191, 3291, 3305, 3318, 3322, and 4385

ETME 3300 Independent Study
- Prerequisite: consent of instructor. Study of assigned topics chosen to develop investigative, analytical, research, or professional skills related to engineering.
ETME 3301 Applied Mechanics of Materials
Prerequisites: MATH 1311, 1304, or 1451, ETME 2302, a grade of C or greater in ETME 3317 or consent of the instructor. Topics include stress and strain, direct and shearing stresses, torsion, bending, deflection, columns, and riveted, bolted, and welded joints. Three hours lecture. Three credit hours.

ETME 3303 Applied Thermal Science
Prerequisites: PHYS 1321 and ETME 2320. Basic thermal properties and heat transfer modes. Theory, operation, and selection of thermal industrial equipment including engines, turbines, boilers, furnaces, and heat exchangers. Two hours lecture, two hours lab. Three credit hours.

ETME 3305 Industrial Energy Utilization
Prerequisites: ETME 2317, 3303, and ECET 3308, or consent of instructor. Study of the efficient utilization of energy in manufacturing and industrial applications. Components of an energy conservation program, assessments of existing processes, analysis and application of energy conservation techniques. One hour lecture and five hours lab. Three credit hours.

ETME 3306 Solar Energy Systems
Prerequisite: a grade of C or greater in ETME 3303. Analysis of solar energy systems and methods of determining the capacity and functional requirements of system elements in terms of applications. Two hours lecture, two hours lab. Three credit hours.

ETME 3307 Applied Dynamics
Prerequisite: a grade of C or greater in ETME 2310. Topics include scalar treatment of kinematics and kinetics of particles, rigid bodies in planar motion, Newton’s laws, work and energy, impulse and momentum, impact, and vibration. Two hours lecture, two hours lab. Three credit hours.

ETME 3311 Mechanical Instrumentation
Prerequisites: ETME 3301, 3303, ECET 3308, and IFSC 1202, or consent of instructor. Measurement of mechanical phenomena including stress, strain, deflection, temperature, pressure, and flow. Automatic data acquisition and handling. Applications to process monitoring and product testing. Two hours lecture, three hours laboratory. Three credit hours.

ETME 3312 Production Systems
Prerequisites: ETME 2317, ETME 1300, or consent of instructor. Production systems and applications. System planning for products and services. Operational planning, Just-In-Time (JIT), Total Quality Management (TQM), process control, and system management. System analysis and computer simulation. Facility planning. Three hours lecture. Three credit hours.

ETME 3313 Tool Design
Prerequisites: grades of C or greater in ETME 2117, 2317. MATH1303. Optimum uses of tool function, geometry, design applications, cutting tools, gages, jigs and fixtures, punch press tools, plastic tools, and special production tools for N/C machines. Two hours lecture, three hours lab. Three credit hours.

ETME 3314 Metallurgy Applications
Prerequisite: a grade of C or greater in ETME 2302. Study of the principles relating crystalline structure to chemical, physical, and electrical properties of metals and alloys. The testing, heat treating, and engineering applications of ferrous and nonferrous alloys are considered. Three hours lecture. Three credit hours.

ETME 3315 Thermal Systems Design
Prerequisite: ETME 3303. Study of air conditioning, refrigeration, steam, fluid, thermal systems, and heat transfer processes for commercial and industrial applications. Emphasis is on systems design, operation, and component selection and specification. Two hours lecture, two hours lab. Three credit hours.

ETME 3317 Statics and Dynamics
Prerequisite or corequisite: MATH 1311. Engineering mechanics involving the study of both statics and dynamics. The equilibrium of bodies at rest or moving with constant velocity and bodies that have a change of motion. Three hours of lecture and lab. Two hours of lecture and two hours of lab. Three credit hours.

ETME 3318 Industrial and Environmental Safety
Prerequisites: grades of C or greater in ETME 2117, 2317, or consent of instructor. Need and justification for safety in the work place. Legal aspects of safety and the OSHA Act. Environmental requirements and emission standards. Scope of human factors and safety management. Planning and implementation of safety measures to counteract hazards such as mechanical, electrical, fire, noise, and toxic substance. Three hours lecture. Three credit hours.

ETME 3319 Plant Layout
Prerequisite: a grade of C or greater in ETME 2317. Principles of facilities planning as applied to selection and location of equipment. Batch and continuous flow. Two hours lecture, three hours lab. Three credit hours.

ETME 3322 Project Management
Prerequisite: MATH 1302. Study of project planning and scheduling using the network methods as presented by PERT and CPM. Network planning, solution methods, and practical applications. Probabilistic time estimates, resource leveling, optimism, potential, and cost control techniques. Includes application of computer solution methods. Three hours lecture. Three credit hours.

ETME 3323 Materials Handling and Plant Layout
Prerequisite: grade of C or greater in ETME 2317. Production, distribution and service systems, material flow and the role of material handling. Material handling principles, analysis techniques, and equipment planning. Plant layout and design. The course includes the use of various case studies and the application of computer methods. Three hours lecture. Three credit hours.

ETME 3324 Plastics and Composites
Prerequisite: CHEM 1402 or consent of the instructor. Introduction to plastics part design, materials, production methods, tooling, and equipment. Process cost analysis and optimization of materials. Two hours lecture. Three credit hours.

ETME 3328 Computer Aided Manufacturing (CAM)
Prerequisites: grades of C or greater in ETME 2303, 2333, and 2317. A study of the programming standards used in industry to control NC and CNC equipment. G and M codes, as well as specific control commands used in manual program. Computer aided design and programming software to generate part geometry and tool path information. Preparation of final program used by the CNC controllers to machine the designed parts. Two hours lecture, three hours lab. Three credit hours.

ETME 3329 Process Planning
Prerequisites: grades of C or greater in ETME 2117, 2317. Analytical models and techniques as applied to manufacturing processing, cost estimating, tooling, and materials selection. Problems involving manufacturing, planning, and control. Two hours lecture, three hours lab. Three credit hours.

ETME 3330 Quality Control
Prerequisite: a grade of C or greater in ETME 2117, 2317; MATH 1302. Statistical foundation for modern quality control. Process control techniques and applications. Product specification and process capability. Planning and application of acceptance sampling including such plans as the Dodge-Romig, military standards 105 and 414. Computer application problems. Three hours lecture. Three credit hours.

ETME 3361 Cost Analysis and Estimation

ETME 4185 Robotics Laboratory
Prerequisite or corequisite: a grade of C or greater in ETME 4385. Robot set-up and programming using control pendant, programmable controllers, ARMBASIC and AML2 languages. Robot capabilities including positioning accuracy, repeatability, and compliance. Robot manufacturing tasks including sorting, machine loading, and assembly. Vision system and applications. One three-hour lab. One credit hour.

ETME 4187 Senior Project I
Prerequisite: ETME 3301. Corequisite: ETME 4317. Product design/manufacturing cycle. The design process from market research through production and service. Concurrent engineering and design evaluation. Project selection and planning for the second phase of the senior project to be completed in ETME 4317. One hour lecture. One hour lab. One credit hour.

ETME 4199 Special Technical Topics I
Prerequisite: consent of instructor. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Meets equivalent of one hour. One credit hour.

ETME 3309 Production Control
Prerequisite: senior standing. Traditional operations research approach to production control and some of its limitations. Modern role of computer in material requirements planning (MRP). Master scheduling, capacity planning, dispatching, and shop floor control. Forecasting, order quantity planning and inventory management. Just-In-Time production. Three hours lecture. Three credit hours.

ETME 4317 Machine Design
Prerequisite: ETME 3301. Basic procedures of engineering machine design from concept to specifications. Material selection, tolerances, variable loads and stress concentrations, shafts and bearings, couplings, bearings, gears, power transmitting elements, brakes, clutches, and welded joints. Emphasis on logical procedure for the design of a complete machine, its components, their functions and layout. Two hours lecture, three hours lab. Three credit hours.

ETME 4319 Plant Engineering
Prerequisite: ETME 3315 or consent of instructor. A practicum on the design and operation of mechanical systems for commercial and industrial applications. Thermal processes, waste water, ducts, piping, and other mechanical systems. Plant operation and maintenance. Two hours lecture. Two hours lab. Three credit hours.

ETME 4321 Computer Aided Engineering (CAE)
Prerequisites: ETME 2333, and ETME 3301, or consent of instructor. Advanced computer aided analysis, stress analysis, kinematics, computer simulation, advanced design software and applications, project documentation. Two hours lecture, two hours lab. Three credit hours.

ETME 4383 Method-Time Analysis
Prerequisites: grades of C or greater in ETME 2117, 2317; senior standing. Design of work methods; time study, performance rating, work sampling and introduction to predetermined and computerized time-data systems. Applications to incentive plans and measured day work. Participative productivity improvement such as gainsharing and quality circles. Two hours lecture, two hours lab. Three credit hours.
ETME 4384 Die Casting
Prerequisites: grades of C or greater in ETME 2317, 2302. Topics include heat flow, dimensional repeatability, metallurgy, molten metal systems, process control, cost estimating, operating the die casting machine, and safety. Two hours lecture, two hours lab. Three credit hours.

ETME 4385 Robotics and Automation
Prerequisites: ETME 3312; knowledge of computer programming or consent of instructor. Industrial robots, types, and method of control and programming. Automation and application to various industrial processes. Human factors considerations. Robot system planning and justification. Two hours lecture, two hours laboratory. Three credit hours.

ETME 4386 Maintenance Management
Planning, organization, measurement, and control of maintenance activities. The planning, acquisition, and control of replacement parts and maintenance of management information systems. Case studies and project work included. Three hours lecture. Three credit hours.

ETME 4387 Senior Project II
Prerequisites: ETME 3312, 4317, and 4187, or consent of instructor. Design problems obtained from industry, current applied research, or student's own initiative are researched in advance, and assigned as senior projects. Problems are defined, analyzed, design solved, and a final report presented. Final reports include design calculations, drawings, production plans, and may, depending on the scope of the project, be demonstrated and tested using a prototype. One hour lecture and three hours lab. Three credit hours.

ETME 4388 Manufacturing Systems Design
Prerequisites: a grade of C or greater in ETME 4170, senior standing. Manufacturing problems obtained from actual industrial situations are assigned to senior students. Each problem is analyzed, designed, and presented orally and in a formal written report by the student. Student reports include drawings, manufacturing plans, cost, and schedule and may be demonstrated by a prototype whenever possible. One hour lecture, three hours lab. Three credit hours.

ETME 4395 Technology Internship II
Prerequisites: junior standing in engineering technology, cumulative GPA of 2.50, minimum GPA of 2.30 for previous semester, approval of assignment by advisor. Professional experience related to student's discipline under supervision of advisor. At least 240 hours of work are required. Three credit hours.

ETME 4399 Special Technical Topics III
Prerequisite: consent of instructor based on relevance of subject to student career goals. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Three credit hours.
The information science program combines the techniques and skills of computer science with the knowledge of information management to produce graduates who are qualified for professional positions in the information technology fields. Students are well trained in the techniques of problem solving, resource management, and systems analysis and design. Graduates find positions as database administrators, network engineers and administrators, systems analysts, web developers and computer system administrators. The information science program differs from comparable programs in computer science in that it combines the basic theories of computing with detailed investigation of current technology and how software is implemented, packaged, and used. The information science experience emphasizes laboratory environments, laboratory time, and hands-on projects using appropriate software to aid in understanding the theory.

An additional goal of the information science curriculum is to develop writing presentation and leadership skills of students. For this reason some courses will have a writing component evidenced by the use of essay exams, written reports, and oral presentations. Some courses will also reinforce the importance of group dynamics through required discussions and completion of group projects.

## Major in Information Science

The bachelor of science in information science requires at least 55 hours of information science including: IFSC 1110, 1201, 1202, 1305, 1310, 2300, 2305, 2310, 2340, 3305, 3310, 3315, 3320, 3330, 3350, 4210, 4396, and 4398. Required courses outside the information science program are MATH 1451, 1452, (or 1304, 1305), and 2121, PHYS 2121, 2122, and 2122. Additional requirements include ECON 3301; MGMT 3300 and 4331; plus the “DCISSE Core Requirements” on page 190. PSYC 3380 must be taken to fulfill the upper-level humanities core requirement. A minor is not required for this curriculum.

## Major in Information Science Recommended Sequence

<table>
<thead>
<tr>
<th>First Semester (15 hours)</th>
<th>Fifth Semester (16 hours)</th>
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<tbody>
<tr>
<td>RHET 1311 Composition I</td>
<td>MKTG 3350 Principles of Marketing</td>
</tr>
<tr>
<td>IFSC 1201 Enterprise Information Science I</td>
<td>IFSC 4210 Computer Ethics</td>
</tr>
<tr>
<td>IFSC 1305 Problem-Solving Techniques in Information Science</td>
<td>IFSC 3315 Applied Networking</td>
</tr>
<tr>
<td>MATH 1451 Calculus I</td>
<td>IFSC 3320 Database Concepts</td>
</tr>
<tr>
<td>HIST 2311 U.S. History to 1877</td>
<td>STAT 3352 Applied Statistics I</td>
</tr>
<tr>
<td>or HIST 2312 U.S. History since 1877</td>
<td>ARHA 2200 Introduction to Visual Art</td>
</tr>
<tr>
<td>or POLS 1310 American National Government</td>
<td>or DRTH 2200 Introduction to Theatre and Dance</td>
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<tr>
<th>Second Semester (16 hours)</th>
<th>Sixth Semester (15 hours)</th>
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<tbody>
<tr>
<td>RHET 1312 Composition II</td>
<td>ENGL 2337 World Literature</td>
</tr>
<tr>
<td>IFSC 1110 Introduction to Ethics</td>
<td>or ENGL 2338 World Literature Themes</td>
</tr>
<tr>
<td>IFSC 1202 Enterprise Information Science II</td>
<td>MGMT 3300 Organizational Behavior and Management</td>
</tr>
<tr>
<td>IFSC 1310 Internet Technologies</td>
<td>IFSC 3330 Current Trends in Database Technology</td>
</tr>
<tr>
<td>MATH 1452 Calculus II</td>
<td>IFSC 3360 System Analysis and Design</td>
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<tr>
<td>SPCH 1300 Speech Communication</td>
<td>RHET 3326 Technical Writing</td>
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<tr>
<th>Third Semester (16 hours)</th>
<th>Seventh Semester (15 hours)</th>
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<tbody>
<tr>
<td>PHYS 2321 Physics for Scientists and Engineers I</td>
<td>MGMT 4331 Management of Information Resources</td>
</tr>
<tr>
<td>PHYS 2121 Physics for Scientists and Engineers I Laboratory</td>
<td>IFSC 4310 Quantitative Analysis</td>
</tr>
<tr>
<td>ACCT 2310 Principles of Accounting I</td>
<td>IFSC 4396 Information Systems Application</td>
</tr>
<tr>
<td>PSYC 2300 Psychology and the Human Experience</td>
<td>IFSC Specialization Elective I (3 hours)</td>
</tr>
<tr>
<td>IFSC 2300 Object-oriented Technology</td>
<td>IFSC Specialization Elective II (3 hours)</td>
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<tr>
<td>IFSC 2305 Computer Systems</td>
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<tr>
<th>Fourth Semester (16 hours)</th>
<th>Eighth Semester (15 hours)</th>
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<tr>
<td>PHYS 2322 Physics for Scientists and Engineers II</td>
<td>MGMT 4361 Entrepreneurship</td>
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<tr>
<td>PHYS 2122 Physics for Scientists and Engineers II Laboratory</td>
<td>PSYC 3380 Cognitive Psychology</td>
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<tr>
<td>MATH 2310 Discrete Mathematics</td>
<td>IFSC 4398 Capstone Project</td>
</tr>
<tr>
<td>IFSC 2340 Human Computer Interface</td>
<td>IFSC Specialization III (3 hours)</td>
</tr>
<tr>
<td>IFSC 2315 Information Systems Software</td>
<td>IFSC Specialization IV (3 hours)</td>
</tr>
<tr>
<td>HIST 1311 History of Civilization I</td>
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<tr>
<td>or HIST 1312 History of Civilization II</td>
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Courses in Information Science (IFSC)

IFSC 1110 Introduction to Ethics
See PHIL 1110. One hour lecture per week. One credit hour.

IFSC 1201 Enterprise Information Science I
Prerequisite: Familiarity with using a desktop computer. Hands-on, project-oriented experiences to develop the basic software tools expertise expected of a student in information science. Exercises in Windows, Microsoft Office, and the internet including email, FTP, and web page building. A computer-based laboratory course whose assignments involve both individual and team activities. Two hours lab per week per credit hour. Two credit hours.

IFSC 1202 Enterprise Information Science II
Prerequisite: IFSC 1201 or consent of the department. Continuation of Enterprise Information Science I. Includes introduction to UNIX and basic algorithm and programming in Visual Basic and elementary SQL, emphasis on understanding graphical user interface technology. This is a laboratory computer-based course with lab exercises pursued individually and in teams. Two hours lab per week per credit hour. Two credit hours.

IFSC 1305 Problem-Solving Techniques in Information Science
Prerequisite: IFSC 1302 or equivalent. Corequisite: IFSC 1301 or equivalent. Examines methods of problem solving in mathematical and non-mathematical contexts. Introduces concepts that pertain to the programming and code patterns, and various diagramming techniques. Uses spreadsheet software and other software tools when appropriate. Three hours lecture per week. Three credit hours.

IFSC 1310 Internet Technologies
Prerequisites: IFSC 1201 or consent of the department. Building on the foundation of web page building in static HTML, this course presents using Dynamic HTML, CGI and JavaScript programming. Also addresses client-pull and server-push technology, elements TCP/IP, and basic internet protocols pertaining to HTTP, FTP, Telnet, and electronic mail servers and clients. Three hours lecture per week. Three credit hours.

IFSC 2300 Object-oriented Technology
Prerequisite: IFSC 2300 or consent of the department. Computer programming in Java language used to implement applications that employ objects and demonstrate software development by refinement and inheritance. Topics include data types, control structures, repetitive structures; data structures including arrays, lists, queues, stacks, and trees; recursion; and File I/O. Two hours lecture and two hours lab per week. Three credit hours.

IFSC 2305 Computer Systems
Prerequisite: IFSC 1305 or consent of instructor. In-depth introduction to the components of a personal computer; topics include number systems, identification and organization of CPU, memory, and peripherals; cache technology; bus technology; upgrading; troubleshooting, and maintaining a personal computer. Incorporates hands-on laboratory experiences. Three hours lecture per week. Three credit hours.

IFSC 2315 Information Systems Software
Prerequisites: IFSC 2300 and IFSC 1305. Computer operating system concepts including processor and memory management, multiprocessing and multiprogramming, interprocess communication, scheduling, virtual memory, device management, input/output, secondary storage and file management, and protection. Three hours lecture per week. Three credit hours.

IFSC 2340 Human Computer Interface
Prerequisites: IFSC 1310 and 2300, or consent of instructor. In-depth study of building user interfaces; user requirements, design, aesthetics, and programming. Three hours lecture per week. Three credit hours.

IFSC 3310 Information Systems Software II
Prerequisites: IFSC 2300 and MATH 2310. Programming knowledge of Java or C/C++ or consent of instructor. Concepts of mass-storage structured distributed systems, and protection and security. Includes network structures, distributed communication, distributed coordination, distributed file systems and operating system security. Various mechanisms to protect files, memory segments, CPU, and other systems resources are studied. Unauthorized access, malicious destruction/alteration, and intrusion detection techniques discussed. Three hours lecture per week. Three credit hours.

IFSC 3315 Applied Networking
Prerequisite: IFSC 2300 or equivalent consent of the instructor. Offers an introduction to the fundamentals and use of relational databases and focuses on four major topics: ER-diagram, relational algebra, SQL language and Oracle. Three hours lecture. Three credit hours.

IFSC 3320 Database Concepts
Prerequisite: junior standing or consent of the instructor. Offers an introduction to the fundamentals and use of relational databases and focuses on four major topics: ER-diagram, relational algebra, SQL language and Oracle. Three hours lecture. Three credit hours.

IFSC 3330 Current Trends in Database Technology
Prerequisite: IFSC 3305, 3320, and MATH 2310 or consent of the instructor. Current trends in database design and management emphasizing typical applications in business, medicine, and science. Survey of modern database technologies including object-related database technology, query processing and optimization, transaction processing concepts, concurrency control techniques, database security and authorization, data mining, data warehousing, and web search engine technology. Discussion of database management and distributed database management issues. Three hours lecture. Three credit hours.

IFSC 3360 System Analysis and Design
Prerequisite: IFSC 3310 or equivalent. Fundamental concepts of object-oriented software analysis and design including requirements specification, analysis, and design of software; issues in software reuse, software packaging, and software management. Three hours lecture per week. Three credit hours.

IFSC 4210 Computer Ethics
Prerequisite: senior standing in Information Science or consent of the instructor. Study of professional codes of ethics and the responsibilities that they place on technology professionals. Investigation of the background and implications of ethical concerns in the application of technology and the use of moral reasoning to comprehend issues of privacy, security, ownership, protection, and law. Two hours lecture per week. Two credit hours.

IFSC 4310 Quantitative Analysis
Prerequisite: MATH 1452, STAT 3352. Survey of mathematical techniques that support decision-making. Decision analysis, regression models, forecasting, linear and integer programming models, simulation modeling and project management. Three hours lecture. Three credit hours.

IFSC 4325 Data Mining Concepts and Techniques
Prerequisite: IFSC 3330 or equivalent. In-depth, practical coverage of essential data mining topics, including OLAP and data warehousing, data preprocessing, concept description, association rules, classification and prediction, and cluster analysis. Advanced topics include mining object-related databases, spatial databases, multimedia databases, time-series databases, text databases, the World Wide Web, and applications in several fields. Three hours lecture. Three credit hours.

IFSC 4330 Database Security
Prerequisite: IFSC 3330 or equivalent. Focus on security issues in databases systems and introduction of how current and future commercial systems may be designed to ensure secrecy and confidentiality. Topics include security models, basic security mechanisms and software, statistical database security, intrusion detection, security models for next generation databases, tested techniques and proven strategies for securing an Oracle environment – from the operating system to the database to the network, and how to implement security using Oracle’s built-in tools. Three hours lecture. Three credit hours.

IFSC 4339 Network Security
Prerequisite: IFSC 3310 or equivalent, and IFSC 3315 or CPSC 4384 or SYEN 3332 or MGMT 4310, or consent of instructor. This course provides students with a concise and in-depth overview of security issues in current computer networks. It first gives a brief introduction of cryptographic algorithms and protocols underlying network security applications, including encryption, hash function, public key algorithm, digital signatures, and key exchanges. Then, it focuses on the security issues in current computer networks as well as network security tools and applications. The course will cover network intrusion/detection techniques and systems. Three hours lecture. Three credit hours.

IFSC 4350 Electronic Commerce
Prerequisite: IFSC 1310 or equivalent and senior standing or consent of instructor. Seminar style course designed for student to be able to describe and apply different electronic commerce business models. Understand technologies in electronic commerce, including the internet and WWW, security systems, electronic payment systems, and intelligent agents. Three hours lecture. Three credit hours.

IFSC 4376 Applied Cryptography
See CPSC 4376 Applied Cryptography.

IFSC 4391 Cooperative Education
Prerequisite: junior or senior standing in information science and consent of chairperson if substituted for a major elective. Work experience to complement and extend the classroom experience through the application of a student’s academic experiences in information science in a professional information technology environment. A minimum of 200 hours of work with the participating employer is required. The exact number of hours per week, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the UALR Office of Cooperative Education. Three credit hours.

IFSC 4395, 4695 Internship
Prerequisite: junior or senior standing in information science and consent of the chairperson if substituted for a major elective. Professional experience related to the student’s major emphasis under supervision of an advisor. A minimum of four hours work on site per week for each credit hour. Advisor files a grade contract with the chairperson. Three or six credit hours.
IFSC 4396 Information Systems Applications
Prerequisite: IFSC 3330. Capstone course in which student teams do an analysis of a live information system, document and present their conclusions. Projects are chosen at the end of IFSC 3330. Teams coordinate their efforts on a sponsor’s site and make regular report to the instructor. Classroom meetings are held as necessary to conduct orientations and hear presentations. Three credit hours.

IFSC 4398 Capstone Project
Prerequisite: IFSC 4396. Continued capstone course in which student teams pursue the design and implementation of system improvements identified in IFSC 4396. Deliverables and schedule are determined by the instructor. Classroom meetings are held as necessary to conduct orientations and hear presentations. Three credit hours.

Bioinformatics Program
Bioinformaticists research, develop, and apply computational tools and approaches for analyzing and thus expanding the use of biological, medical, behavioral, and health data. Many of the advances in the life sciences have been made possible through the application of bioinformatics (e.g., the construction of the human genome). The preponderance of massive amounts of data generated in sequencing labs, microarray facilities, population studies, and ecological analyses provides many opportunities for using information science techniques to manage the data and gain new insights into the knowledge it contains.

The bioinformatics minor at UALR trains students in the areas of information science and biology and prepares them to apply computational techniques to a variety of life science areas. Building upon a student’s major in biology, computer science, or information science, students are prepared to work in this exciting, fast-growing, and multidisciplinary field.

Minor and/or Professional Certificate in Bioinformatics
For students or professionals who have completed, or are completing an undergraduate major in biology, computer science, or information science, the minor or professional certificate in bioinformatics consists of 18 credit hours. All courses must be completed with a grade of C or greater. Students without a strong and current background in biology or information/computer science may need to complete up to 29 credit hours.

Students should check with the Biology, Chemistry, and Information Science departments regarding appropriate prerequisites and course sequencing for all courses in the minor. Information Science students may substitute CHEM 1402 and 1403 for the physics sequence science requirement, thereby meeting the CHEM 2450 prerequisite. For waiver of prerequisite requirements based on demonstrated competencies, contact the Chair of the Information Science Department.

Required Courses (7 hours):

- BINF 2345 Introduction to Bioinformatics
- BINF 4445 Bioinformatics Theory and Applications

IFSC 4100, 4200, 4300, 4400, 4500, 4600 Independent Study
Prerequisite: consent of chairperson. Individual research by the advanced student. Topics determined on the basis of faculty interest and availability. Two to four hours per week per credit hour; the exact time and nature of the experience depends on the subject matter and is agreed upon at the beginning of the term by the student and the instructor. Agreement must be in writing and filed with the chairperson. May be repeated. Maximum of six credit hours can be applied toward IFSC major requirements. One, two, three, four, five, or six credit hours.

IFSC 4199, 4299, 4399, 4499 Special Topics
Prerequisite: junior standing or consent of instructor. Advanced, specialized topics of current interest in information science. May be repeated up to a maximum of 12 credit hours counting toward the major. One, two, three, or four hours lecture or equivalent per week. Dual-listed in the UALR Graduate Catalog as IFSI 5199, 5299, 5399, 5499. One, two, three, or four credit hours.

Minor in Bioinformatics
The minor is designed for students who are majoring in Biology, Computer Science, or Information Science. Students in other majors may complete the minor in bioinformatics, but additional coursework may be required.

Professional Certificate in Bioinformatics
Students or working professionals who may or may not have an undergraduate or graduate degree may elect to earn a Professional Certificate in Bioinformatics. The requirements for the certificate are the same as the minor, with the exception that Bioinformatics Theory and Applications must be taken for graduate credit (i.e., as BINF 5445).

Information Packets
Information packets for the Bioinformatics Minor and Professional Certificate in Bioinformatics may be obtained from the Information Science Department, Donaghey College of Information Science and Systems Engineering, ETAS 258, phone: (501) 569-8951.

Additional Courses Required for Information Science or
Computer Science Students (11 hours):

- CHEM 2450 Organic Chemistry-Short Course
- BIOI 2401 Microbiology
- BIOI 3300 Genetics

Additional Courses Required for Biology Students (11 hours):

- IFSC 1202 Enterprise Information Science II
- IFSC 1305 Problem-Solving Techniques in Information Science
- IFSC 2300 Object-oriented Technology
- IFSC 3320 Database Concepts

Additional Courses or Demonstrated Competencies Required for Students in Other Majors (up to 22 hours):

- CHEM 2450 Organic Chemistry-Short Course
- BIOI 2401 Microbiology
- BIOI 3300 Genetics
- IFSC 1202 Enterprise Information Science II
- IFSC 1305 Problem-Solving Techniques in Information Science
- IFSC 2300 Object-oriented Technology
- IFSC 3320 Database Concepts

Courses in Bioinformatics (BINF)

BINF 2345 Introduction to Bioinformatics
Prerequisites: MATH 1302 and computer literacy or consent of instructor. This course introduces the student to bioinformatics: the application of information science to studies in the life sciences. Through a survey of the basic sciences influencing computational biology and an overview of information science strategies applicable to the life, medical, and health sciences, an interdisciplinary approach to understanding the evolving field of bioinformatics is developed. Two hours of lecture and two hours of laboratory per week. Three credit hours.

BINF 4445 Bioinformatics Theory and Applications
Prerequisites: Consent of instructor or the following: BIOI 3300, IFSC 3320, IFSC 2300, and STAT 3352 or equivalents. BINF 2345 is recommended. An overview of concepts central to the study and application of bioinformatics drawing upon the fields of biostatistics, computer and information science, and the life sciences. Dual-listed in the UALR Graduate Catalog as BINF 5445. Three hours of lecture, and two hours laboratory per week. Four credit hours.
Systems engineering focuses on the integration of diverse components requiring knowledge from electrical, mechanical, computer, and telecommunications to create complex systems. The systems engineering degree prepares students for careers in telecommunications, computers, electrical systems, and mechanical systems, involving a number of disciplines such as computer and wireless networks, power systems, and automated manufacturing systems including robotics and real-time control systems. Systems engineering is distinct from traditional engineering disciplines that focus on component design skills. Systems engineers analyze and simulate components to optimize an overall system for cost, reliability, quality, and sustainability. The systems engineering department offers a systems engineering core curriculum with four options for specialization: telecommunication systems, computer systems, electrical systems, and mechanical systems.

The telecommunication systems option provides the students with a basic understanding of cellular and wireless communications including third generation wireless technologies and networking protocols, voice over IP, and the emerging mobile multimedia internet.

The computer systems option focuses on the integration of hardware, software, and operating system with the goal to analyze and optimize computer systems including networked systems, automated robotic systems, and integrated manufacturing systems.

The electrical systems option imparts knowledge of various electrical systems design and analysis including complex networks, digital and analog circuits, and control and power systems.

The mechanical systems option provides students with skills in the design and analysis involving statics and dynamics of mechanical systems, engineering materials, and fluid and thermal systems.

The curriculum includes 15 credit hours of electives to allow the student the necessary flexibility to target a specific career area or acquire broad background in related disciplines. The flexibility afforded in the choice of electives allows a systems-engineering graduate a tremendous latitude in career choices.

Students who wish to transfer to the Systems Engineering program should consult with the department’s Director of Undergraduate Studies. Students will be individually advised for placement within the systems engineering program.

### Admission Requirements

To be admitted into the systems-engineering program, the student must be eligible to enroll in MATH 1451 Calculus I and in RHET 1312 Composition II. Students who wish to major in systems engineering but need to take RHET 1311 Composition I or MATH 1302 College Algebra and 1303 Trigonometry may be provisionally admitted into the major once they have enrolled in these courses, but they may require more time to complete the program than students who take Engineering Calculus and Composition II in their first term. Prior to formal admission, students are strongly encouraged to seek advice from a faculty advisor in systems engineering and to declare their major as early as possible so they can be advised in the department.

### Major in Systems Engineering

The Systems Engineering program is designed to provide a broad-based education in the design and analysis of complex systems, offering four options for specialization: computer systems, telecommunication systems, mechanical systems, and electrical systems. Each option has a common systems engineering core of 35 hours, 29 hours of communication, humanities, social science and business courses, and 30 hours of science and mathematics. Each option requires a core of 20 hours in option-specific courses. In addition, each option requires 15 hours of systems-engineering electives. Students may choose one or more minors, but a minor is not a degree requirement.
## Major in Systems Engineering

**DCISSE Core Requirements (29 hours)**

- IFSC 1110 Introduction to Ethics
- ECON 3301 Survey of Economics

**Required Science and Mathematics (30 hours)**

- CHEM 1402 General Chemistry I
- PHYS 2321 Physics for Scientists and Engineers I
- PHYS 2121 Physics for Scientists and Engineers I Laboratory
- PHYS 2322 Physics for Scientists and Engineers II
- PHYS 2122 Physics for Scientists and Engineers II Laboratory
- MATH 1451 Calculus I
- MATH 1452 Calculus II
- MATH 2453 Calculus III
- MATH 3312 Linear Algebra
- MATH 3322 Introduction to Differential Equations

**Systems Engineering Core (35 hours)**

- SYEN 1301 Introduction to Computer Systems
- SYEN 1303 Introduction to Telecommunication Systems
- SYEN 1302 C/C++ Programming for Engineers and Scientists
- SYEN 2315 Circuits and Systems
- SYEN 2115 Circuits and Systems Laboratory
- SYEN 3301 Dynamic Systems Modeling and Simulation
- SYEN 3310 Dynamic Systems Modeling and Simulation Laboratory
- SYEN 3312 Optimization Methods in Systems Engineering
- SYEN 3314 Probability Theory and Random Signals
- SYEN 3316 Discrete Event Systems Modeling and Simulation
- SYEN 3318 Decision and Risk Analysis
- SYEN 3332 Communication Networks
- SYEN 4385 Systems Engineering Capstone Design I
- SYEN 4386 Systems Engineering Capstone Design II

**Specialization Option (20 hours)**

See below

**Other required courses**

- IFSC 1110 Introduction to Ethics
- MGMT 3300 Organizational Behavior and Management
- MGMT 3362 Small Business Management
- MGMT 4361 Entrepreneurship

**Specialization Options**

**Telecommunication systems Option (20 hours)**

- SYEN 3350 Signals and Systems
- SYEN 3150 Signals and Systems Laboratory
- SYEN 3332 Communication Networks
- SYEN 3354 Communication Systems I
- SYEN 3154 Communication Systems Lab
- SYEN 4356 Electromagnetic Waves and Antennas
- SYEN 4358 Communication Systems II
- SYEN 4355 Mobile Multimedia Internet

**Computer-systems Option (20 hours)**

- SYEN 3330 Digital Systems
- SYEN 3130 Digital Systems Laboratory
- SYEN 3332 Communication Networks
- SYEN 3334 Advanced Microprocessor Systems
- SYEN 3134 Advanced Microprocessor Systems Laboratory
- SYEN 4330 Computer Architecture
- SYEN 4332 Applied Operating Systems
- SYEN 4334 Software System Engineering

**Electrical Systems Option (20 hours)**

- SYEN 3334 Advanced Microprocessor Systems
- SYEN 3134 Advanced Microprocessor Systems Laboratory
- SYEN 3351 Network Analysis
- SYEN 3352 Analog and Digital Electronics
- SYEN 3152 Analog and Digital Electronics Laboratory
- SYEN 3356 Electromagnetic Fields and Waves
- SYEN 3358 Fundamentals of Power Systems
- SYEN 3364 Introduction to Control Systems Engineering

**Mechanical Systems Option (20 hours)**

- SYEN 3370 Statics and Dynamics
- SYEN 3372 Engineering Materials
- SYEN 4374 Fluid Mechanics
- SYEN 4174 Fluid Mechanics Laboratory
- SYEN 4376 Mechanics of Materials
- SYEN 4176 Mechanics of Materials Laboratory
- SYEN 4378 Engineering Thermodynamics
- SYEN 4379 Heat Transfer

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1. See “Core Requirements for DCISSE Bachelor Degrees” on page 191

2. Some engineering electives may be selected from the offerings of other departments such as computer science and applied science with the approval of the student’s advisor.
Fundamentals of Engineering Examination

With the introduction of mechanical and electrical systems option into the Systems Engineering curriculum, the Department strongly recommends that students specializing in mechanical and electrical options take the Fundamentals of Engineering Examination in their senior year. The following set of courses represents the recommended set of preparatory courses for the Fundamentals of Engineering Exam:

- MATH 1451 Calculus I
- MATH 1452 Calculus II
- MATH 2453 Calculus III
- MATH 3312 Linear Algebra
- MATH 3322 Introduction to Differential Equations
- CHEM 1402 General Chemistry I
- CHEM 1403 General Chemistry II
- PHYS 2321 Physics for Scientists and Engineers I
- PHYS 2121 Physics for Scientists and Engineers I Laboratory
- PHYS 2322 Physics for Scientists and Engineers II
- PHYS 2122 Physics for Scientists and Engineers II Laboratory

The following set of courses represents the recommended set of preparatory courses for the Fundamentals of Engineering Exam:

- MATH 1451 Calculus I
- MATH 1452 Calculus II
- MATH 2453 Calculus III
- MATH 3312 Linear Algebra
- MATH 3322 Introduction to Differential Equations
- CHEM 1402 General Chemistry I
- CHEM 1403 General Chemistry II
- PHYS 2321 Physics for Scientists and Engineers I
- PHYS 2121 Physics for Scientists and Engineers I Laboratory
- PHYS 2322 Physics for Scientists and Engineers II
- PHYS 2122 Physics for Scientists and Engineers II Laboratory

1. Technical elective
2. Required for mechanical systems specialization
SYEN 1301 Introduction to Computer Systems
Prerequisite: consent of instructor. Introduction to the fundamental hardware and software underpinning of computing systems; MOS transistors, logic gates, latches, logic structure, memory, von Neumann model of execution, organization and architecture of a simple computer; machine, assembly, and high-level language programming. Required for systems engineering students in the computer systems options, but open to all students on a space-available. Six hours lab. Three credit hours.

SYEN 1302 C/C++ Programming for Engineers and Scientists

SYEN 1303 Introduction to Telecommunication Systems
Prerequisite: consent of instructor. Transmission fundamentals, communication networks, protocols and the TCP/IP suite, antennas and propagation, signal encoding techniques, spread spectrum, coding and error control, satellite communications, cellular wireless networks, cordless systems and wireless local loop, mobile IP and WAP, wireless LAN technology, IEEE 802.11 wireless LAN standard, and Bluetooth technology. Required for systems engineering students in the telecommunication systems option, but open to all students on a space-available basis. Three hours lecture. Three credit hours.

SYEN 1304 Introduction to Electrical Systems
Prerequisite: consent of instructor. Direct current fundamentals: alternating current and components; electrical and electronic component functions; digital logic devices; computer architecture; computer components; semiconductors, the load line; CMOS logic and memory; other semiconductor devices and circuits; fabrication of ICs and MEMS; power generation, transmission, and distribution; wireless communications systems; digital signal processing; electronics terminology. Required for systems engineering students in the computer systems in the students in the electrical systems option, but open to all students on a space-available basis. Three hours lecture. Three credit hours.

SYEN 1305 Introduction to Mechanical Systems
Prerequisite: consent of instructor. The mechanical engineering profession; problem-solving skills; machine components and tools; forces in structures and fluids; materials and stresses; thermal and energy systems; motion of machinery; mechanical design. Required for systems engineering students in the mechanical systems option, but open to all students on a space-available basis. Three hours lecture. Three credit hours.

SYEN 2115 Circuits and Systems Laboratory
Prerequisite or corequisite: SYEN 2315. Structured exercises to illustrate class topics. Both SPICE simulation and breadboarding/measurement exercises. Use of spectrum analyzer to determine frequency response and system identification. Two hours lab. One credit hour.

SYEN 2310 Systems Modeling - Discrete
Prerequisite: MATH 1452. Introduction to dynamic modeling, converting real world problems into mathematical models, discrete dynamical system models with examples from natural sciences, social sciences, and engineering, systems with inputs, probabilistic modeling with discrete systems. Three hours lecture. Three credit hours.

SYEN 2315 Circuits and Systems

SYEN 3110 Dynamic Systems Modeling and Simulation Laboratory
Prerequisite or corequisite: SYEN 3310. Modeling and simulation of dynamic systems models. Personal computer users. Introduction to computer modeling. Graphical presentation of results. Two hours lab. One credit hour.

SYEN 3130 Digital Systems Laboratory
Prerequisite or corequisite: SYEN 3330. Weekly laboratory providing practical knowledge in designing, assembling, testing, and simulating combinational and sequential digital circuits. Two hours lab. One credit hour.

SYEN 3134 Advanced Microprocessor Systems Laboratory
Prerequisite or corequisite: SYEN 3334. Laboratory course to accompany SYEN 3334 Advanced Microprocessor Systems. Two hours lab. One credit hour.

SYEN 3150 Signals and Systems Laboratory
Prerequisite or corequisite: System Engineering 3330. Laboratory course to accompany SYEN 3330 Signals and Systems. Two hours lab. One credit hour.

SYEN 3152 Analog and Digital Electronics Laboratory
Prerequisite or corequisite: SYEN 3352. Laboratory course to accompany SYEN 3352 Analog and Digital Electronics. Two hours lab. One credit hour.

SYEN 3154 Communication Systems Lab
Prerequisite or corequisite: SYEN 3354. Weekly laboratory experiments to accompany Communication Systems I. Two hours lab. One credit hour.

SYEN 3310 Dynamic Systems Modeling and Simulation
Prerequisite(s): MATH 3312 and 3322. Introduction to mathematical modeling of dynamic systems, continuous and discrete system models, system response in time and frequency domains, transfer functions, stability characterization, state-space formulation of modeling problems, fitting models to data, examples from sciences and engineering. Three hours lecture. Three credit hours.

SYEN 3312 Optimization Methods in Systems Engineering
Prerequisites: MATH 2453 and 3312. Foundation of linear programming, non-linear programming, integer programming, dynamic programming, discrete time optimization models, continuous time optimal control, and artificial intelligence (AI) techniques for solving optimization problems. Three hours lecture. Three credit hours.

SYEN 3314 Probability Theory and Random Signals
Prerequisite: MATH 2453. Introduction to probability, joint and conditional probabilities, Bayes’ theorem, Bernoulli trials, random variable, distribution and density functions, expectation and moments, multiple random variables, joint distribution and density, random processes, stationarity and independence, correlation functions, spectral characteristics, linear systems with random inputs, statistical parameter estimation, fitting models to data. Three hours lecture. Three credit hours.

SYEN 3316 Discrete Event Systems Modeling and Simulation
Prerequisite: SYEN 3314. The theory and practice of discrete-event simulation modeling and analysis, discrete-event dynamic systems (DEDs), simulation logic and control, discrete-event simulation languages, software tool and library issues, experiment design, output analysis, model verification and validation, and modern simulation languages including animation. Three hours lecture. Three credit hours.

SYEN 3330 Digital Systems
Prerequisites: SYEN 1302, 2315. An introduction to digital system design necessary for modern digital design. Required for systems engineering students in the digital system design, digital system design, and computer system design classes. New paradigms that cover classical topics and integrate modern technology into the discussion for a real-world viewpoint of modern computer systems. Three hours lecture. Three credit hours.

SYEN 3332 Communication Networks
Prerequisites: SYEN 3312, 3314, 3316. Comprehensive study of the major communication networks: data, telephone, cable TV, and wireless; network architectures, protocols, control, and economics; packet-switched networks; Ethernet, ATM, SONET, and T3; switched networks; switched service; ATM networks: quality of service, IP-over-ATM; wireless networks; optical networks; modeling and simulation of networks; parallel, cluster, and grid computing. Three hours lecture. Three credit hours.

SYEN 3334 Advanced Microprocessor Systems
Prerequisite: SYEN 3330. The design and implementation of microprocessors (from the 8086 to the Pentium members of the series). Corequisite of microprocessor system design, Architecture of microprocessors, memory interfacing, assembly language programming, I/O programming, I/O peripheral devices, I/O interface design, and data communications. Three hours lecture. Three credit hours.

SYEN 3350 Signals and Systems
Prerequisite: MATH 2453, 3322. Linear system theory, convolution, sampling theorem, Fourier series representation, Laplace transform, Fourier transform, digital filtering. Three hours lecture. Three credit hours.

SYEN 3351 Network Analysis
Prerequisites: SYEN 2315 and 2315. Basic circuit laws; circuit analysis methods; capacitive and inductive transients and equivalent circuits; initial, final, and first‐order circuits; Laplace transforms; circuit analysis with Laplace transforms; transfer functions; sinusoidal steady-state analysis; frequency response analysis and Bode plots; waveform analysis; Fourier analysis. Three hours lecture. Three credit hours.

SYEN 3352 Analog and Digital Electronics
Prerequisites: SYEN 2315 and 2115. Electronic systems; measurement sensors and actuators; amplification; feedback; semiconductors and diodes; field effect transistors; bipolar junction transistors; analog signal processing; digital systems; sequential logic; digital design; and noise in communication systems. Three hours lecture. Three credit hours.

SYEN 3354 Communication Systems
Prerequisites: SYEN 3314 and 3350. Introduction to communication systems, signals and spectra, signal transmission over communication channels, filtering, linear modulation, spatial and spectral filtering, convolution, data transmission, communication systems. Three hours lecture. Three credit hours.
SYEN 3356 Electromagnetic Fields and Waves
Prerequisites: SYEN 2315 and MATH 2453. Vector algebra and vector calculus; electrostatics, magnetostatics, Maxwell's equations for time-varying fields, plane-wave propagation and transmission lines; waveguide transmission and radiation and antennas. Three hours lecture. Three credit hours.

SYEN 3358 Fundamentals of Power Systems
Prerequisites: SYEN 3356. Electrical machines: generators, motors, and transformers; electrical and electronic drives: motor control and power electronics; electric power systems; transmission, distribution, and utilization of electricity. Three hours lecture. Three credit hours.

SYEN 3360 Data Communications
Prerequisites: SYEN 1302 and 2310. Introduction to principles of digital transmission systems for computer and telecommunication networks, data transmission, transmission media, communication standards. Communication media and signal encoding schemes; point-to-point communication standards; OSI model, layering concepts; data-link, network, and transport layer protocols; error control, congestion control, and routing algorithms; TCP/IP protocol; networking over the internet. Three hours lecture. Three credit hours.

SYEN 3362 Algorithm Design
Prerequisites: SYEN 1302, 3312, and 3314. Design, analysis, and implementation of algorithms important to computer systems and telecommunication systems; algorithmic design patterns and frameworks; data structures; combinatorial algorithms; graph algorithms; geometric algorithms; numerical algorithms; and internet algorithms, including text processing, cryptography, and network algorithms. Three hours lecture. Three credit hours.

SYEN 3364 Introduction to Control Systems Engineering
Prerequisite: SYEN 3310. Introduction to control systems, physical system modeling, differential and state-variable models, analysis, and design of control systems, including feedback control; dynamics, and state-variable models, analog and digital signal processing, stability analysis, performance criteria, root-locus techniques, frequency-response techniques, cascade controller design, pole placement design, techniques for nonlinear, discrete-event, and sampled-data systems, design examples. Three hours lecture. Three credit hours.

SYEN 3370 Statics and Dynamics
Prerequisites: SYEN 1305; MATH 2453, 3312, and 3322. Statics of particles, rigid bodies, equivalent systems of forces, equilibrium, centroids and centers of gravity, analysis of structures, forces in beams and cables, friction, moments of inertia, method of virtual work, kinematics of particles, Newton's Second Law; energy and momentum methods, systems of particles, kinematics of rigid bodies, plane motion of rigid bodies, forces and accelerations, kinetics of rigid bodies in three dimensions, mechanical vibrations. Three hours lecture. Three credit hours.

SYEN 3372 Engineering Materials
Prerequisites: SYEN 3370. Atomic structure and bonding, crystal structures, crystal geometry, solidification, crystal-line imperfections, and diffusion in solids, mechanical properties of metals, polymeric materials, phase diagrams, engineering alloys, ceramics, composite materials, corrosion, electrical properties of materials, optical properties and superconductive materials, magnetic materials. Three hours lecture. Three credit hours.

SYEN 3391 Cooperative Education in Systems Engineering I
Prerequisites: declaration of systems engineering major, completion of at least 60 hours total credit hours with an overall GPA of 2.5 or higher, completion of 20 or more credit hours of systems engineering courses with a GPA of 2.5 or higher, and permission of the systems engineering cooperative education faculty coordinator. This course is for qualified students who would like to combine classroom study with at least 200 hours of engineering-related paid employment. The course is a part of the agreement with the employer, the student, the engineering faculty, and the UALR Office of Cooperative Education. An individualized Cooperative Education Learning Agreement will specify the detailed work assignment, including employer, supervisor, job title, work schedule, and rate of pay, as well as the employer's requirements, including learning objectives, learning activities, documentation of learning, learning assessments, and grading policy. This course will be allowed to satisfy up to six hours of program electives. Three credit hours.

SYEN 4174 Fluid Mechanics Laboratory
Prerequisite or corequisite: SYEN 4174. Analysis of experimental data, basic electrical measurements and sensing devices, pressure measurement, flow measurement, temperature measurement, data acquisition and processing, report writing and presentation, design of experiments. Two hours lab. One credit hour.

SYEN 4176 Mechanics of Materials Laboratory
Prerequisite or corequisite: SYEN 4176. Analysis of experimental data, basic electrical measurements and sensing devices, force measurement, torque measurement, strain-gage determination, vibration measurement, data acquisition and processing, report writing and presentation, design of experiments. Two hours lab. One credit hour.

SYEN 4320 Linear System Theory
Prerequisites: SYEN 3364, MATH 3312. Linear discrete and continuous time systems analysis; linear systems, 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. Dual-listed in the UALR Graduate Catalog as SYEN 4320. Three hours lecture. Three credit hours.

SYEN 4325 Fuzzy Logic in Control and Systems Engineering
Prerequisite: SYEN 3364. Introduction, basic concepts of fuzzy logic, fuzzy sets, fuzzy relations, fuzzy if-then rules, fuzzy implications and approximate reasoning, fuzzy logic in control theory, stabilizing controlled fuzzy logic applications in information systems, fuzzy model identification, neuro-fuzzy systems and genetic algorithms. Dual-listed in the UALR Graduate Catalog as SYEN 5325. Three hours lecture. Three credit hours.

SYEN 4329 Robust and Optimal Control
Prerequisite: SYEN 4220. Fundamentals of linear systems, signal and system spaces, power and spectral norms, feedback structure, internal stability, coprime factorization, Bode's gain and phase relations, observability, controllability, balanced realizations, model reduction, model uncertainty, small gain theorem, control of existence of stabilizing controllers, H2 optimal control, synthesis of state feedback via LMIs, and H1 control, and uncertain systems. Dual-listed in the UALR Graduate Catalog as SYEN 4325. Three hours lecture. Three credit hours.

SYEN 4330 Computer Architecture
Prerequisites: SYEN 3330, 3310. Design principles for computer systems. Number representations, descriptions for computer arithmetic, computer system organization, control structures, including microprogrammed control, memory organization, input/output structures, and introduction to parallel processing. Dual-listed in the UALR Graduate Catalog as SYEN 3330. Three hours lecture. Three credit hours.

SYEN 4332 Applied Operating Systems

SYEN 4334 Software System Engineering
Prerequisites: SYEN 1300, 2315, and 3318. 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. Three hours lecture. Three credit hours.

SYEN 4340 Applied Numerical Methods
Prerequisites: MATH 3312 and 3322. MATLAB fundamentals and programming, roundoff and truncation errors, roots of equations, systems of linear algebraic equations, curve fitting, polynomial interpolation, numerical integration, ordinary differential equations, and eigenvalues. Three hours lecture. Three credit hours.

SYEN 4343 Networks and Combinatorial Optimization
Prerequisites: SYEN 3312 or consent of the instructor. An in-depth study of combinatorial programming and network flow optimization. Emphasis on discrete optimization and specialized solution techniques that are efficient way to solve mixed-integer programming problems. Techniques include minimum cost flow, networks with gain, multi-commodity flow networks, networks with side constraints and Lagrangian relaxation. Computational complexity is also discussed. Dual-listed in the UALR Graduate Catalog as SYEN 5343. Three hours lecture. Three credit hours.

SYEN 4350 Digital Signal Processing
Prerequisites: SYEN 3350 and 3352. Signals and signal processing; discrete-time signals and systems in the time and frequency domains; digital processing of continuous-time signals; finite-length discrete transforms; discrete-time signals and the z-transform, the s-domain; LTI discrete-time systems in the transition domain; digital filter structures; IIR digital filter design; FIR digital filter design; DSP algorithm implementation; analysis of finite word-length effects; multirate DSP fundamentals; multirate filter banks and wavelets; applications of DSP. Three hours lecture. Three credit hours.

SYEN 4353 Advanced Digital Communications
Prerequisites: SYEN 3154, 3354. In-depth examination of wireless digital communication design strategies. Topics covered include digital modulation, radiowave propagation characteristics. Signal detection methods, BER performance improvement and simulation techniques RF/hardware architectures, modulation path for modulation and demodulation techniques, signal processing building blocks for wireless systems, method for mitigating wireless channel impairments, perform system simulations, BER and channel models, predict system performance and evaluate trade-offs, list TDMA and CDMA techniques, and 3G evolution, describe design issues for wireless systems, particularly those issue in which transmit and receive implementation affect system performance. Dual-listed in the UALR Graduate Catalog as SYEN 5353. Three hours lecture. Three credit hours.

SYEN 4355 Mobile Multimedia Internet
Prerequisite: SYEN 3314. 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 UMTS, 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. Three hours lecture. Three credit hours.
SYEN 4356 Electromagnetic Waves and Antennas

SYEN 4357 Antennas and Propagation
Prerequisites: SYEN 4356. Antenna basics; the antenna family; point sources; arrays of point sources; the electric dipole and thin linear antennas; the loop antenna; end-fire antennas; slot, patch, and horn antennas; flat sheet, corner, and parabolic reflector antennas; broadband and frequency-independent antennas; antenna temperature, remote sensing, and radar cross-section; self and mutual impedances; the cylindrical antenna and the moment method; arrays of dipoles and of apertures; lens antennas; special antennas. Three hours lecture. Three credit hours.

SYEN 4358 Communication Systems II
Prerequisites: SYEN 4356 and 4357. Principles of digital data transmission, pulse code modulation, M-ary communication, multiplexing, digital CW modulation, noise, optimum signal detection, information theory, error correcting codes, spread spectrum communication, satellite and wireless communication. Three hours lecture. Three credit hours.

SYEN 4366 Advanced Digital Systems
Prerequisites: SYEN 3330, 3310. Advanced design principles for digital systems. 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. Dual-listed in the UALR Graduate Catalog as SYEN 5366. Three hours lecture. Three credit hours.

SYEN 4374 Fluid Mechanics
Prerequisites: SYEN 3370. Properties of fluids, pressure and fluid statics, fluid kinematics, Bernoulli and energy equations, momentum, dimensional analysis, flow in pipes, differential analysis, approximations of the Navier-Stokes equation, drag and lift, compressible flow, open-channel flow, turbomachinery, computational fluid dynamics (CFD). Three hours lecture. Three credit hours.

SYEN 4376 Mechanics of Materials
Prerequisites: SYEN 3372. Stress, strain, axial loading, torsion, pure bending, analysis and design of beams, shear stress in beams and thin-walled members, transformation of stress and strain, principal stresses, deflection of beams, columns, energy methods. Three hours lecture. Three credit hours.

SYEN 4378 Engineering Thermodynamics
Prerequisites: SYEN 3374. Properties of pure substances, First Law of Thermodynamics, closed systems, control volumes, Second Law of Thermodynamics, entropy, exergy, gas power cycles, vapor and combined power cycles, refrigeration cycles, thermodynamic property relationships, gas mixtures, gas-vapor mixtures and air conditioning, heat transfer by conduction, convection, and radiation. Three hours lecture. Three credit hours.

SYEN 4379 Heat Transfer
Prerequisites: SYEN 4378. Introduction to conduction, steady-state conduction, transient conduction, introduction to convection, external flow, internal flow, natural convection, boiling and condensation, heat exchangers, introduction to radiation, radiation processes and properties, radiation exchange between surfaces. Three hours lecture. Three credit hours.

SYEN 4380 Heating, Ventilating, Air Conditioning, and Refrigeration Systems
Prerequisites: SYEN 3379. Air conditioning systems, ASHRAE standards, properties of moist air, air conditioning processes, comfort and health, indoor environmental quality, heat transmission in buildings, space heating load, solar radiation, cooling load, energy calculations, building simulation, pumps and piping design, space air diffusion, fans and building air distribution, direct contact heat and mass transfer, extended surface heat exchangers, refrigeration. Three hours lecture. Three credit hours.

SYEN 4381 Thermal and Fluid System Design
Prerequisite: SYEN 4379. 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-feedwater system, the circulating-water system, gas turbine and combined cycles, principles of nuclear energy, nuclear reactors and power plants, geothermal energy, solar energy, wind energy, energy from the oceans, energy storage and fuel cells, environmental aspects of power generation. Three hours lecture. Three credit hours.

SYEN 4382 MEMS and Microsystems
Prerequisites: SYEN 2315, 3372, and 4378. Overview of MEMS and microsystems, applications, working principles of microsystems, engineering science for microsystem design and fabrication, engineering mechanics for microsystem design, thermofluid engineering and microsystem design, scaling laws in miniaturization, materials for MEMS and microsystems, microsystem fabrication processes, overview of micromanufacturing, microsystems design, microsystems modeling and simulation, microsystem packaging, overview of nanoscience and nanotechnology. Three hours lecture. Three credit hours.

SYEN 4383 Finite Element Analysis
Prerequisite: SYEN 4340, 4376, and 4378. 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. Three hours lecture. Three credit hours.

SYEN 4385 Systems Engineering Capstone Design I
Prerequisite: completion of at least 40 credit hours of SYEN courses. First semester of systems engineering capstone design sequence. Focuses on the requirements definition process and involves designing a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, using appropriate engineering standards. Students work in multidisciplinary teams on system engineering design projects and make formal written and oral presentations of their preliminary work. Three hours lecture. Three credit hours.

SYEN 4386 Systems Engineering Capstone Design II
Prerequisite: SYEN 4385. Second semester of systems engineering capstone design sequence. Focuses on the solution definition process and involves designing a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, using appropriate engineering standards. Students work in multidisciplinary teams on system engineering design projects and make formal written and oral presentations of their preliminary work. Two hours lecture, two hours lab. Three credit hours.

SYEN 4391 Cooperative Education in Systems Engineering II
Prerequisites: SYEN 3391, an overall GPA of 2.5 or higher, completion of 40 or more credit hours of systems engineering courses with a GPA of 2.5 or higher, and permission of the systems engineering cooperative education faculty coordinator. This course is for qualified students who would like to combine classroom study with at least 200 hours of engineering-related paid employment. The course is a partnership between the student, the employer, the systems engineering faculty, and the UALR Office of Cooperative Education. An individualized Cooperative Education Learning Agreement will specify the detailed work assignment, including employer, supervisor, job title, work schedule, and rate of pay, as well as the academic requirements, including learning objectives, learning activities, documentation of learning, learning assessments, and grading policy. This course will be allowed to satisfy up to six hours of program electives. Three credit hours.

SYEN 4499, 4299, 4399, 4499 Special Topics
Prerequisite: consent of instructor. Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability. Dual-listed in the UALR Graduate Catalog as SYEN 5199, 5299, 5399, 5499. One, two, three, or four hours lecture. One, two, three, or four credit hours.
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Joe Angolia
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Dr. Jan Dannaway
Academic Advisor
The following terms are used in this Catalog and in everyday life at UALR. You are encouraged to review these terms to better understand campus terminology.

**AAGE**
The acronym stands for Arkansas Assessment of General Education. See “Rising Junior Exam.”

**Academic Clemency**
This is a policy whereby students who have been away from UALR for at least two full years can petition to remove earlier course work from their UALR academic record. The purpose of the policy is to allow students a second chance in college. See “Academic Programs and Requirements” for more information.

**Academic Discipline**
This term refers to an organized body of knowledge. Most academic departments are organized around an academic discipline. Some departments contain more than one discipline (the Department of Sociology and Anthropology, for example). As a general guideline, anything listed as a separate group of courses in the class schedule is an academic discipline.

**Accreditation**
Accreditation is a way a university or its programs are measured against national standards. There are two kinds: university-wide and specialized. For UALR, accreditation of the entire University is done by the North Central Association of Colleges and Schools, one of several regional accrediting associations. This accreditation means, among other things, that your work at UALR will be recognized at any other accredited institution and vice versa. Degree programs with specialized accreditation are listed under “General Information” in this Catalog. Do not be surprised if your major field is not listed; many areas do not have accrediting agencies.

**Assessment**
The University is continuously evaluating its programs to make sure that they are not only well focused on what they should teach, but also teaching it effectively. You will participate in this assessment process when you take the Rising Junior Examination. See also “Rising Junior Examination.”

**Associate Degree**
Usually called the two-year degree, an associate degree requires completion of a minimum of 62 credit hours. At UALR each associate degree is designed so the credit can also be applied toward a related baccalaureate degree at UALR or elsewhere.

**Baccalaureate Degree**
Also called the bachelor’s degree, this is the standard undergraduate college degree. It is often thought of as the four-year degree, but some students complete it in three years, and some take as long as five to seven years or longer. It requires at least 124 credit hours.

**CAAP**
The acronym stands for Collegiate Assessment of Academic Proficiency. CAAP is part of the Rising Junior Examination. See also “Rising Junior Examination.”

**CEU**
Continuing Education Units are the national standard for certifying certain kinds of educational offerings that are formal and structured but not applicable toward a degree. Such work is aimed at professional development or personal enrichment. One CEU is awarded for 10 clock hours of instruction. See also “Noncredit Work.”

**CLEP**
The acronym stands for College Level Examination Program, a national program through which students can obtain college credit in certain areas by taking a comprehensive examination and making a certain score. See also “Testing Out.”

**Competencies**
UALR’s curriculum is designed to help students develop nine fundamental competencies: aesthetic experience, critical thinking, ethical and moral consciousness, historical consciousness, international awareness, mathematics, philosophy and methods of science, social and cultural awareness, and verbal literacy.

**Cooperative Education**
Cooperative Education is an academic program for qualified students who would like to combine classroom study with academically related paid employment. “Co-op” creates opportunities for students locally in business, government, industry, and social service agencies.

**Core Curriculum**
The core curriculum at UALR is a 44-hour requirement designed to provide a foundation for the student’s further academic and professional activities. Required of all students seeking baccalaureate degrees, the core curriculum includes options from across the disciplines, including arts, humanities, sciences, and social sciences. The core courses are designed to help students develop nine fundamental competencies. See also “Competencies.” All core courses include active teaching and learning strategies, reading and writing experiences, and critical thinking activities.

**Corequisite**
A corequisite is a course that has to be taken at the same time as another course. If a course has a corequisite, the course description in this Catalog specifies it. See also “Prerequisite.”

**Course number**
A four-digit numbering system used to designate each course at UALR. The first digit identifies the level of the course: 1 for freshman, 2 for sophomore, 3 for junior, 4 for senior, 5 and above for graduate-level courses. The second digit is the number of credit hours. The last two numbers are assigned by the department, sometimes arbitrarily and sometimes in a specific pattern, depending on the department. Thus, ENGL 2337 is a sophomore-level, three-credit-hour course.

**Credit Hours**
This is the standard unit of measurement for university-level work applicable toward a degree. One credit hour is equal to one 50-minute class period per week, per semester. Thus the usual three-credit-hour course is based on meeting 50 minutes a day three days a week for a semester. For laboratory work, one credit hour is equal to two or three hours of laboratory work. Thus, a laboratory that meets for one three-hour session once a week for a semester would have one hour of credit. The term “credit hours” is often shortened to “hours,” as in “a baccalaureate degree requires at least 124 hours of work.” UALR measures its work in semester credit hours; if you’re transferring from a college that uses quarter hours, the Office of Records and Registration will convert them into semester hours for you.
Degree
The term “degree” refers to a designation such as bachelor of arts, bachelor of science, bachelor of science in education, bachelor of business administration, and a few other general designations. UALR offers seven undergraduate degrees. All UALR undergraduate majors are grouped under one of these headings. See the list of degrees and majors in “Academic Programs and Requirements” in this Catalog.

Department, College, and School
A department is the basic administrative unit at UALR. It consists of a group of faculty members and their chairperson. The department appoints faculty, develops courses and programs, and advises students. Departments with related interests (e.g., accounting, economics and finance, management, and marketing and advertising) are organized into colleges. Academic administrative units without departments are called schools (e.g., School of Law).

Developmental Courses
Courses at the "0" level (0300, 0301, 0600, etc.) are developmental courses and do not count toward the 124 hour minimum for graduation; nor do grades received count in the cumulative grade point average.

Discipline
See “Academic discipline.”

Elective
An elective is any course that is not required, either by the University’s core requirements or by the requirements of a major or minor. Many degree programs described in this Catalog will list the number of elective hours available. Electives may complement the rest of a student’s work or be taken just for fun.

Faculty Rank
Depending on experience and qualifications, each full-time UALR faculty member is an instructor, assistant professor, associate professor, professor, or distinguished professor. Most of them teach a full load of classes each semester in addition to engaging in scholarly and service activities. The rank “lecturer” is a title used for a person who teaches only one or two classes a semester. If you are interested in how a faculty member progresses through these ranks, ask any of your instructors to let you see a copy of UALR’s Faculty Handbook. “Professor” is also a generic term and title for all university teachers.

Field Experience
The UALR curriculum includes a number of courses that allow or require students to work for credit in a professional or career setting. Sometimes this is part of a regular course; other times it is a separate course. In the latter case, the course may have in its title an expression such as “cooperative education,” “field experience,” “internship,” “practicum,” “special project,” or “student teaching.”

Grade Point Average (GPA)
The grade point average is a way of mathematically computing academic performance. It is determined by assigning a value to each letter grade, multiplying by the number of credit hours in the course, and dividing by the total number of hours attempted. The GPA is the standard measure for retention and graduation requirements. UALR is on a four-point system, which means that an A grade is assigned a value of four points (sometimes called quality points), a B three points, a C two points, a D one point, and an F zero points. Here's an example of a grade point average for one semester:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Grade (Value)</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET 1311</td>
<td>3</td>
<td>B (3)</td>
<td>9</td>
</tr>
<tr>
<td>SPCH 1300</td>
<td>3</td>
<td>A (4)</td>
<td>12</td>
</tr>
<tr>
<td>LESC 1108</td>
<td>1</td>
<td>F (0)</td>
<td>0</td>
</tr>
<tr>
<td>DRTH 1260</td>
<td>2</td>
<td>C (2)</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1402</td>
<td>4</td>
<td>D (1)</td>
<td>4</td>
</tr>
<tr>
<td>HIST 1311</td>
<td>3</td>
<td>C (2)</td>
<td>6</td>
</tr>
<tr>
<td>Total:</td>
<td>16</td>
<td></td>
<td>35</td>
</tr>
</tbody>
</table>

Divide the total hours (16) into the total grade points (35) to find the GPA of 2.18 (slightly above a C average). The UALR cumulative GPA is based on all college-level work taken at UALR. Your semester grade report will show both the semester and the cumulative GPA. (Some developmental course grades are excluded from the GPA. Please see “Developmental courses” in this glossary.)

Hours
See “Credit hours.”

Lower-level
Freshman and sophomore courses (UALR course numbers beginning with 1 or 2) are called lower-level courses. See also “Upper-level.”

Major
A major is a degree-seeking student’s primary area of academic concentration. Students are encouraged to declare a major as soon as possible by filling out the declaration of major form in the Office of Academic Advising. All UALR majors require at least 27 credit hours of work in the major, and some require more. A few, called major/minors, require up to 60 credit hours of work in a single field and do not require a minor. See “Declaring a Major” on page 34. See also “Minor.”

Matriculation
A term used to refer to the act of enrolling in the University. When, for example, transfer students are notified that certain parts of their transcripts will be evaluated “after matriculation,” that means after they have formally enrolled at UALR.

Minor
A minor for a degree-seeking student is a secondary area of concentration. Most UALR minors consist of 18 to 24 credit hours. A minor is required in all baccalaureate degree programs unless the major program specifies that a minor is not required. (This occurs in some concentrated programs where the major, or the major-minor, requires a large number of credit hours.)

Noncredit Work
This refers to a variety of UALR educational offerings that are not applicable to a degree. It includes some of the work in the Center for Developmental Skills and most of the professional development classes offered through off-campus credit. CEU work is also noncredit work. See also “CEU.”

Prerequisite
A prerequisite is a course you have to take before you can take another course. For example, ACCT 2310 Principles of Accounting I is a prerequisite to ACCT 2330 Principles of Accounting II. If a course has a prerequisite, it is listed in the course description in this Catalog. See also “Corequisite.”

Residency
There are two primary uses for this term. The first use applies to the school at which a student takes course work. UALR graduates must take their last 30 hours of work for a baccalaureate degree or their last 15 hours of work toward an associate degree in residence. That means the credit work must be taken at UALR. All credit work offered by UALR is considered in residence, whether day or night, on- or off-campus. The second use of the term “residence” pertains to where a student lives. UALR, like all state-supported colleges and universities in Arkansas, charges a higher tuition fee to out-of-state students. If you have just moved to the state, contact the Office of Records and Registration for the legal definition of “residence” for tuition purposes.

Rising Junior Examination
This exam is designed to assess students’ learning in UALR’s general education core. All UALR students are required to take the exam when they have completed 45-60 college-level hours. It consists of the Collegiate Assessment of Academic Proficiency. See also “CAAP.”

Section
You will see this term most often in connection with the class schedule and registration. It refers to each offering of the same course at a different time and with a different instructor. For example, SPCH 1300 Speech Communication (the speech course required for all undergraduate students) is one course, but in any semester the department may offer as many as 25 or 30 sections of it, each at a different time or with a different instructor. When registering, be sure you enroll in the section, as well as the course, you want.

Testing-out
This phrase refers to receiving college credit by making an appropriate score on a comprehensive test in a certain area. UALR offers such tests in two ways: those designed by UALR departments and those designed by national programs such as CLEP. There is a charge for taking such tests. Contact the Office of Testing Services and Student Life Research for details. See also “CLEP.”

Transcript
This is the continuous, formal, and official record of your work at a university. If you are a transfer student, you are required to request that the Office of Records and Registration at all universities you have attended previously send an official transcript to UALR. The transcript lists all courses you take, grades, major and minor, and degree awarded. An unofficial and incomplete version of it, sometimes used by advisors, is called a worksheet.

Undergraduate
This term refers to academic work leading to the associate or baccalaureate degrees and to students working toward those degrees. It is usually seen in comparison to “graduate,” which refers to academic work taken by students who already have a baccalaureate degree.

Upper-level
Junior and senior courses (UALR course numbers beginning with 3 or 4) are called upper-level courses. A baccalaureate degree requires a minimum of 45 upper-level credit hours. See “Baccalaureate Degree Requirements” on page 25. See also “Lower-level.”

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Minors
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ADN Administration North
• Cashier and Student Accounts
• Graduate School
• Office of Research and Sponsored Programs
ADS Administration South
• Admissions & Financial Aid, Records & Registration
• Center for Developmental Skills
• Chancellor’s Office, Provost’s Office
ATH Athletic Field House
BAFC Bailey Alumni & Friends Center
BSU Baptist Student Union
CU Central Utility
DKSN Dickinson Hall
• College of Education Dean’s Office
• Mathematics and Statistics, and Computer Science Departments
• EAST Lab and Donaghey Scholars
DPS Department of Public Safety
DNST Dance Studio
DSC Donaghey Student Center
• Vice Chancellor for Educational and Student Services and Dean of University College
• Dean of Students
• Office of Campus Life
• SGA, Student Organization Offices, UALR Forum
• Food Court and Cafeteria
• Health Services
• Disability Support Services
• Bookstore
• Fitness Center and Pool
ED Education
• Off-Campus Programs
ERSC Earth Sciences
• Earth Science Laboratories
ETAS Engineering Technology and Applied Sciences
• CyberCollege Dean’s Office
• College of Science and Mathematics Dean’s Office
• Graduate Institute of Technology
• Applied Science, Engineering Technology, Construction Management, Information Science, Nursing, and Systems Engineering Departments
FA Fine Arts
• College of Arts, Humanities, and Social Sciences Dean’s Office
• Art, Music Departments
• Stella Boyle Smith Concert Hall
FH Fribourgh Hall
• Biology, Chemistry, Earth Science, and Health Science Departments
• Planetarium
FPB Fair Park Building
HOU Housing Office
HYII Hyper II
LARS Larson Hall
• School of Social Work
LIB Ottenheimer Library
• Multimedia Services
PHYS Physics
PP Physical Plant
• MidSOUTH
PRKD Parking Deck
RBUS Reynolds College of Business
• College of Business Dean’s Office
• College of Business Classrooms and Faculty Offices
• Institute for Economic Advancement
• Arkansas Small Business Development Center
• Census Data Center
RH Ross Hall
• College of Professional Studies Dean’s Office
• Criminal Justice, Health Services Administration, Military Science, and Public Administration Departments
• Institute of Government
• University College: Academic Advising, Cooperative Education, Counseling and Career Planning, and Testing and Student Life Research
SCLB Science Laboratories Building
SH Stabler Hall
• English, History, International and Second Language Studies, Philosophy and Liberal Studies, Political Science, Psychology, School of Mass Communication, and Sociology, Anthropology, and Gerontology Departments
• KUAR, KLRE, and Campus Television Station
SPCH Speech Building
• Audiology and Speech Pathology, and Speech Communication Departments.
SUA Student Union A
• Multimedia Classrooms
SUB Old Student Union
• Computing Services
• Department of Rhetoric and Writing
• University Writing Center
THEA University Theater
TRI Talent Search
URH University Residence Hall
US University Services
• Human Resource Services
• Office of Communications
• Office of Development
WHSE Warehouse

Campus Parking
Parking Deck (Visitor Parking Available)
Metered Lot (Visitor Parking Available)
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Adult Education (ADED)

ADED 4301 Psychology of Adult Learning
Prerequisite: course work in adult education. Examination of the research related to adult learning and development as it can be applied to the practice of adult education. Adult learning theories of the cognitivists, behaviorists, and humanists; state and phasic theories of development. Dual-listed in the UALR Graduate Catalog as ADED 5301. Three credit hours.

ADED 4303 Teaching Adults
Prerequisite: course work in adult education. Examination of the teaching/learning process from planning to presentation. Micro-teaching involving the integration of adult learning principles will be conducted. Dual-listed in the UALR Graduate Catalog as ADED 5303. Three credit hours.

ADED 4304 Methods and Materials in Adult Education
Prerequisite: course work in adult education. An overview of the methods used to create an adult learning environment and techniques that are considered most effective. A process used for evaluating adult education materials will also be considered. Dual-listed in the UALR Graduate Catalog as ADED 5304. Three credit hours.

Advertising (ADVT)

ADVT 3300 Principles of Advertising
Prerequisite: MKTG 3350. Fundamentals of local, national, and international advertising are covered, including social, ethical, and legal/regulatory aspects. Major members of the industry are discussed including advertisers, agencies, and the media. The advertising process is detailed, including research, strategic marketing planning, copy-writing, art direction, and media planning and selection. Three credit hours.

ADVT 3310 Advertising Campaign I
Prerequisite: ADVT 3300. Fundamentals of advertising from the advertiser’s perspective as an integrated element of the promotion mix are covered, including the administration of advertising campaigns, budgets, media planning, and advertising research. Three credit hours.

ADVT 4310 Public Relations
Prerequisite: ADVT 3300. History and development of public relations as an influential part of the management function is discussed, including the public relations process of fact finding, opinion research, planning, communicating, and evaluating. Decision making and application of management policy as it relates to the organization’s various publics is covered. Three credit hours.

ADVT 4320 Advertising Campaign II
Prerequisite: ADVT 3300. Writing advertising copy and creating visual graphics are covered, along with production techniques used in newspaper, magazine, radio, television, outdoor, direct mail, and other media. Different creative philosophies are studied, and creative consistency with the marketing strategy based on research is stressed. Three credit hours.

ADVT 4370 International Promotion Management and Public Relations
Prerequisite: MKTG 3350. Promotion and public relations planning and strategy for management decision making for business, industry, institutions, and organizations involved in multinational activities. The effects of fact findings, planning, communicating, and evaluating promotion and public relations programs; the communications challenges in implementing programs, caused by language, social, moral, economic, educational, and political differences. Three credit hours.

ADVT 4290, 4390 Independent Study
Prerequisites: prior consent of instructor, marketing or advertising/public relations major or minor with a minimum 3.00 GPA. Two or three credit hours.
American Humanics (AMHU)

**AMHU 1100 Introduction to Nonprofit Professional Studies**

The course provides an introduction to the nonprofit or third sector in the US with an emphasis on the historical and philosophical foundations of youth and human service organizations. Topics covered include the roles of nonprofit organizations in meeting human service needs, philanthropic structure of nonprofit organizations, importance of a mission orientation for nonprofit organizations, and possible careers in nonprofit organizations. One credit hour.

**AMHU 3300 Management of Nonprofit Agencies**

Prerequisites: AMHU 1100, attendance at approved American Humanics workshop, or permission of the instructor. This course is an overview of nonprofit management. Topics include board and committee development, fund-raising principles and practices, human resource development and supervision, general nonprofit management, nonprofit accounting and financial management, nonprofit marketing, program planning, and risk management. It also includes at least one group project and is required for American Humanics minors. Three credit hours.

American Studies (AMST)

**AMST 3300 Special Problems**

Prerequisite: junior standing. Interdisciplinary study of selected topics. Three credit hours.

**AMST 3310 The Indian in American Society After 1887**

Studies of the American Indian in the twentieth century, with emphasis on recent political, economic, social, and artistic movements. Three credit hours.

**AMST 3380 The Indian in American History**

See HIST 3380.

**AMST 4300 Seminar**

**AMHU 4301, 4302 Internship**

Prerequisites: American Humanics minor, senior standing, 2.0 grade point average, and permission of the instructor. The internship requires 150 hours of supervised field experience in a nonprofit organization (50 hours for each hour of credit). It is designed to allow students to further develop their selected certification competencies and may be repeated for up to six hours of credit.
ANTH 1300 Introduction to Anthropology
An exploration of human diversity and the four subfields of anthropology: physical anthropology, cultural anthropology, archaeology, and linguistic anthropology. Three credit hours.

ANTH 1415 Physical Anthropology
A hands-on examination of the study of past and present human and nonhuman primates as biological organisms. Topics include human genetics, variation and osteology, nonhuman primate taxonomy and behavior, forensic anthropology and the human fossil record. Four credit hours.

ANTH 2301 World Cultures
See INTS 2301.

ANTH 2310 World Regions
World regional patterns of population, natural resources, and economic activities with reference to the natures of regions and their characteristics. Regional patterns of Europe, North America, Latin America, Africa, and East and South Asia. Three credit hours.

ANTH 2316 Cultural Anthropology
Prerequisite: RHET 3131 recommended. Examines the concept of culture, cultural processes, and anthropological theories. Topics include subsistence strategies, politics, religion, gender, ethnicity, economics, marriage, stratification, and socialization. Case studies from both small-scale and large-scale societies. Required for majors. Three credit hours.

ANTH 3181 Statistics Laboratory
See SOCI 3181.

ANTH 3312 North American Indians
Prerequisite: ANTH 2316. A study of Indian cultures from the Arctic to northern Mexico from immediately after European contact to the present. Three credit hours.

ANTH 3313 Archaeology
Examination of the archaeological record from the Paleolithic to the Neolithic and the emergence of civilization in both the Old and New Worlds. Required for majors. Three credit hours.

ANTH 3314 Culture and Personality
Prerequisite: ANTH 2316. Comparative study of behavior and socialization in selected cultures; the influence of early socialization on later attitudes and corresponding behavior associated with puberty, reproduction, and death. A cross-cultural analysis of the result of cultural transmission. Three credit hours.

ANTH 3316 Japanese Culture and Society
Prerequisite: ANTH 2316 or SOCI 2300. The anthropological and sociological study of Japanese culture and society; covers Japanese history, major social institutions, and aspects of culture which are unique to Japan. Three credit hours.

ANTH 3317 Introduction to the Study of Language
See ENGL 3313.

ANTH 3318 Sexuality, Society, and Culture
This course provides a social scientific examination of the nature of sexuality cross-culturally as well as in Western society. Examines sexuality in a broader socio-cultural context and cultural construction used from prehistoric to post-modern eras as a form of reproduction and a means for deep expression of intimacy with others and as a device for the domination and exploitation of people of various social categories. Three credit hours.

ANTH 3315 Cultures of the Middle East
The anthropological study of Middle Eastern culture and society; covers the political conflicts and cultural adaptations in the region. The course also focuses on ethnic differentiation, and the influence of Islam upon all the cultures and peoples of the Middle East. Three credit hours.

ANTH 3333 Women in a Changing Society
See SOCI 3333.

ANTH 3340 Experiences of Black Americans
See SOCI 3340.

ANTH 3365 Aging and Culture
Prerequisites: ANTH 2316, GERO 1300, SOCI 2300, or consent of instructor. A cross-cultural perspective of the psychological and sociological dimensions associated with aging and the aged; demographic and cultural examination of older people in traditional and industrial societies. Three credit hours.

ANTH 3366 Religious Counter cultures
See RELS 3366.

ANTH 3378 Medical Anthropology
Prerequisite: ANTH 3135 or 2316. Comparison of non-Western and Western medical systems, definitions of health and disease, kinds of treatment, and varieties of cures; examination of the problem of how to adapt Western medicine to the needs of diverse cultural and ethnic groups. Three credit hours.

ANTH 3381 Social Statistics
Recommended: MATH 1311 or equivalent. Basic statistical techniques and their corresponding theoretical premises, which are often used in statistical reasoning in sociology. Qualitative variables, characteristics of attributes, measures of their variation, correlation, and tests of significance are stressed. Three credit hours.

ANTH 3383 Human Paleontology
Prerequisite: consent of instructor. Study of the fossil evidence for human evolution and the scientific principles that apply to that study; interpretation of morphological patterns in a functional and adaptive framework; interaction of cultural and biological aspects of hominid development. Three credit hours.

ANTH 3388 Kinship and Descent
Prerequisite: ANTH 2316. Systematic treatment of marriage, descent, and alliances on a cross-cultural basis. Examination of social behavior and terminologies related to kinship systems drawn from traditional and modern societies. Three credit hours.

ANTH 4310 Urban Anthropology
Prerequisite: ANTH 2316. A survey of urbanization throughout the world, with emphasis on urban adaptation of rural migrants and the phenomenon of urbanization in emerging countries. Three credit hours.

ANTH 4316 Linguistic Anthropology
Introduction to the subfield of linguistic anthropology. Examines the impact of linguistic structure on culture, socioeconomic factors in linguistic variation, intercultural and intracultural verbal and nonverbal communication. Also examines the theories and methods of descriptive anthropological linguistics applied to non-Indo-European languages and introduces the student to structural linguistic analysis. Required for majors. Three credit hours.

ANTH 4320 Sociocultural Change
Prerequisite: ANTH 2316. 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. Three credit hours.

ANTH 4321 Religion, Society, and Culture
Introduction to the role of shamans, witches, diviners, cultic and magic belief systems, function of myth, ritual, religious symbolism, meaning of spirit possession, revitalization, and ancestor worship in tribal, peasant, and modern societies. Three credit hours.

ANTH 4325 Egyptology
This course will survey the archaeology of Egyptian civilization, from the earliest settlement of the Nile River Valley through the conquest of Alexander the Great and his successors. The course will also consider the origins of the field of Egyptology as well as a number of key archaeological sites representing the lives of the elite as well as the ordinary citizens of the Nile River valley. Three credit hours.

ANTH 4327 Anthropology Field Experience
Practical experience consisting of at least 90 hours of supervised work in a private or public organization. The objective is for students to apply theoretical orientations and anthropological skills in a work situation. Three credit hours.

ANTH 4332 Population Analysis
Population growth, description of population dynamics; analysis of economic, social, political, and ecological implications of population growth or decrease. Three credit hours.

ANTH 4340 Applied Anthropology
Prerequisite: 15 hours of anthropology or consent of instructor. Selected topics concerning the contribution of anthropology to social services and social planning, especially in the fields of education, health care, law enforcement, and economic development. Three credit hours.

ANTH 4355 Forensic Anthropology
Prerequisite: ANTH 1315 or consent of instructor. Forensic anthropology applied to knowledge of human variation to legal matters. The primary emphasis in this course will be human skeletal variation. The theoretical basis of sex determination, age estimation and ethnic origin classification based upon skeletal characteristics will be examined. Other issues such as fire death scene investigation, interval since death, and forensic archaeology also will be addressed. This course will be offered once a year. Dual-listed in the UALR Graduate Catalog as ANTH 5355. Three credit hours.

ANTH 4155 Forensic Anthropology Laboratory
Corequisite: ANTH 4355 or prerequisite: ANTH 4355. Emphasizes hands-on experience in using anthropometric, morphological and statistical techniques expressed in large and stature estimation as well as sex and race determination. Laboratory exercises also include forensic archaeology, treatment and proper handling of forensic anthropology evidence, and how to write a forensic anthropology report. Dual-listed in the UALR Graduate Catalog as ANTH 5155. One credit hour.

ANTH 4380 (4180, 4280) Independent Study
Prerequisites: ANTH 1315 or 2316, junior or senior standing, consent of chairperson. One, two, or three credit hours.

ANTH 4382 Anthropological Theory
Prerequisite: ANTH 1315 or 2316. Examines the range of theories used to describe and explain variability in sociocultural phenomena. Explores the organization of particular theories as well as issues that separate divergent theories. Major theoretical orientations to be explored include evolutionism, Marxism, Freudianism, structuralism, structural-functionalism, ethnosciencism, diffusionism, historical particularism, cultural ecology, sociobiology, and cultural materialism. Required for majors. Three credit hours.
ANTH 4390 Teaching Internship  
Prerequisite: consent of instructor. Working with individual instructors, upper- 
level majors assist lower-level students by holding study sessions twice a week for 
those enrolled in ANTH 1300, 1315, or 2316 and performing other tasks 
determined through consultation with the instructor. Three credit hours.

ANTH 4395 Senior Seminar in Holism  
Prerequisite: completion of major core. Senior capstone course. Students read and 
discuss current work bridging the subfields of anthropology and write essays on 
their understandings of selected goals for the major. Three credit hours.

ANTH 4398 Special Topics  
Selected topics in anthropology. Three credit hours.

ANTH 4399 Anthropology Cooperative Learning Internship  
Prerequisite: declared major, 60 hours of course work completed, consent of the 
department chairperson and director of cooperative education. Placement in an 
applied work experience in either physical or cultural anthropology or 
archeology. Students will work under the direction of specialists in these areas or 
specialists in related areas. Credit will be awarded based on at least 200 hours of 
work during the semester and fulfillment of the contractual obligations agreed to 
by both UALR and the public/private agency where placement occurs. Three 
credit hours.

ANTH 4485 Ethnographic Methods  
Prerequisite: ANTH 2316. Instruction and supervised practice in data gathering 
methods and analyses in native or ethnic settings. Lectures and discussions twice 
weekly. The fourth hour is reserved for field study. Data gathering methods, 
analysis in native or ethnic settings. Four credit hours.

ANTH 4600 Principles of Archaeological Research  
Introduction to methods and theory of archaeological research, Arkansas 
prehistory, and public archaeology through excavation, laboratory experience, 
and lectures. Meets daily, off campus. Six credit hours.

Courses in Applied Science (ASCI)

ASCI 4310 Introduction to Signal Processing  
Prerequisite: MATH 3322 or equivalent. Introduction to the fundamental concepts 
and mathematics 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, power spectral density, and time delays. Bode plots, poles and zeros, 
state space. Standard system models (ARMA, ARMAX). FIR and IIR filters. Dual- 
listed in the UALR Graduate Catalog as ASCI 5310. Three hours lecture. Three 
credit hours.

ASCI 4315 Advanced Dynamics  
Prerequisites: MATH 2453, PHYS 3311. 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 
tronics, vehicle motion, planetary motion. Dual-listed in the UALR Graduate 
Catalog as ASCI 5315. Three credit hours.

ASCI 4325 Measurement Techniques  
Prerequisite: SYEN 2315 or equivalent. Principles of operation and 
implementation of transducers used in electronic measurement systems. Sensors 
used for the measurement of strain, 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. Dual- 
listed in the UALR Graduate Catalog as ASCI 5325. Two hours lecture and three 
hours laboratory per week. Three credit hours.

ASCI 4330 Acoustics I  
Prerequisite: MATH 2453 or equivalent. Development of the equations for 
acoustics and vibrations. Transducers for measurement of sound and acceleration. 
Design of sonic actuators using network analysis. Analog and digital processing of 
signals, including spectral analysis, adaptive signal processing, and cepstral 
analysis. Applications to noise analysis and control, and machinery diagnosis 
through sound and vibrations measurements. Dual-listed in the UALR Graduate 
Catalog as ASCI 5330. Three credit hours.

ASCI 4335 Mechatronics I  
Prerequisites: MATH 2453 or equivalent, PHYS 3311 or equivalent, or consent of 
instructor. 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, are covered. Use of electric 
motors and pneumatics in mechanical systems is covered. Integration of sensors, 
including potentiometers, limit switches, and yaw rate sensors is covered. 
Theories of failure will be introduced, and basic stress/strain calculations will be 
done. Design theories and project management will be introduced. Dual-listed in 
the UALR Graduate Catalog as ASCI 5335. Three hours lecture. Three credit hours.

ASCI 4340 Mechatronics II  
Prerequisite: ASCI 4335 or equivalent. The combination of classical mechanical 
design, electronic analysis and design, control engineering, and computer science 
in the design of complex electric/mechanical/controlled systems. Commonly used 
sensors (encoders, potentiometers, accelerometers) and actuators (stepping 
motors, DC motors) are studied. Interfacing sensors and actuators to a 
microcomputer, discrete controller design, and real-time programming for control 
using the C programming language. There is a significant, out-of-class project 
exercise associated with this course. Dual-listed in the UALR Graduate Catalog as 
ASCI 5340. Three hours lecture. Three credit hours.

ASCI 4345 Microcontrollers  
Prerequisite: SYEN 2315 or equivalent or consent of the instructor. Experimental, 
project-oriented; architecture, programming, interfacing, design of systems; based 
on single chip microcontroller. Offered on demand. Dual-listed in the UALR 
Graduate Catalog as ASCI 5345. Three credit hours.

ASCI 4360 Potential Theory  
Solution to Laplace 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 
Laplace equation. Bessel function and orthogonality of Bessel function. Legendre 
function, Associated Legendre function, and orthogonality of Legendre function. 
Dual-listed in the UALR Graduate Catalog as ASCI 5360. Three credit hours.
Art Education (ARED)

ARED 3245 Public School Art
An investigation of elementary-level art education focusing on materials and methods for teaching art history, art criticism, and studio production to children. Attention is given to the relationship of the visual arts to general education, developmental growth of children in art, curriculum planning, and current issues in art education. This course is offered for preprofessional teachers in the College of Education’s Early Childhood Education program. Two credit hours.

ARED 3316 Teaching Art in the Secondary School
Methods and materials for teaching art in the secondary school. (See “Secondary Teacher Licensure” on page 45.) Three credit hours.

ARED 3345 Public School Art
An investigation of elementary-level art education focusing on materials and methods for teaching art history, art criticism, and studio production to children. Attention is given to the relationship of the visual arts to general education, developmental growth of children in art, curriculum planning, and current issues in art education. Three credit hours.

ARED 4325 Foundations in Art Education
A survey of the history of art education with an emphasis on the changing philosophies, theories of learning, and the subsequent goals and objectives made apparent in curriculum development. Dual-listed in the UALR Graduate Catalog as ARED 5325. Three credit hours.

ARED 4194, 4294, 4394 Independent Study
Prerequisite: consent of instructor. Research on a subject selected in consultation with the instructor. Admission to this course must be approved by the art education advisor before registration. May be taken for one, two, or three hours credit.

Art History (ARHA)

Prerequisites for all advanced courses in the history of art: ARHA 2310 for ancient and medieval; ARHA 2311 for all other courses; or consent of instructor. ARHA 2310 must precede ARHA 2311. Upper-level courses are offered no more frequently than once every two years; they are offered on an irregular basis during summer terms.

Each art history credit hour requires three clock hours of work each week. One hour is scheduled in class and the additional two hours are scheduled outside class.

ARHA 2200 Introduction to Visual Art
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of art, vocabulary and descriptive terms used in the visual arts, and how to write about them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with MUHL 2200 and DRTH 2200. Two credit hours.

ARHA 2310 Survey of the History of Art I
Survey of the art history from prehistoric times to the Renaissance. Three credit hours.

ARHA 2311 Survey of the History of Art II
Prerequisite: ARHA 2310 or consent of instructor. Survey of the history of art from the Renaissance through the contemporary period. Three credit hours.

ARHA 2312 Survey of Non-Western Art
Prerequisite: ARHA 2310 or consent of instructor. Introduction to art outside the Western European tradition which focuses on the major artistic traditions of India, China, Japan, Africa, Oceania, and the Americas. Emphasis is placed on recognition of major works of art and artistic style and what these reveal about the cultures that produced them. Three credit hours.

ARHA 3301 American Art
Prerequisite: ARHA 2311 or consent of instructor. American art from the colonial period to early twentieth century. Three credit hours.

ARHA 3302 History of Photography and Related Visual Arts
Prerequisite: ARHA 2311 or consent of instructor. Major figures in the history of art who used the camera as their medium, beginning with the nineteenth-century figures such as Daguerre and Fox-Talbot and continuing to the present. Emphasis on the analysis of photographs, motion pictures, and video works in terms of style, iconography, social history, and connoisseurship. Three credit hours.

ARHA 3304 Medieval Art
Prerequisite: ARHA 2310 or consent of instructor. Early Christian, Byzantine, Carolingian, Ottonian, Romanesque, and Gothic art. Three credit hours.

ARHA 4297 Capstone in Art History
Prerequisite: 21 hours in art history including ARHA 4300. Required of art history majors. An independent research project under faculty guidance. The course must be presented in writing and orally. Normally taken in a student’s last semester. Two credit hours.

ARHA 4300 Studies in the History of Art
Prerequisite: ARHA 2311 or consent of instructor. A seminar for advanced students involving research on topics in art history, criticism, and aesthetics selected for study by students in consultation with art history faculty. Dual-listed in the UALR Graduate Catalog as ARHA 5300. Three credit hours.

ARHA 4301 Art and Architecture Study Tour
Prerequisite: ARHA 2311 or consent of instructor. Travel study tour involving directed reading and research on objects to be seen during the tour. Three credit hours.

ARHA 4302 Art Museum Studies
Prerequisite: 6 hours of upper-level art history courses or permission of instructor. An introduction to art museum operation, topics covered will include the acquisition, management, and care of works of art, exhibition planning and installation, administration functions, educational and community roles of museums, finance and fund raising. The goals of the course are to familiarize students with the day-to-day work of an art museum and to engage them in critical thinking about the broader context in which it operates. Three credit hours.

ARHA 4304 Ancient Art
Prerequisite: ARHA 2310 or consent of instructor. A study of the history of ancient art and architecture with emphasis on the Greek and Roman periods. Three credit hours.

ARHA 4305 Italian Renaissance Art
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, and architecture in Italy from c. 1300 to c. 1600. Dual-listed in the UALR Graduate Catalog as ARHA 5322. Three credit hours.

ARHA 4306 Renaissance Art in Northern Europe
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, architecture, and graphic arts in northern Europe (especially the Low Countries, France, and England), from the end of the Gothic period through the Reformation. Dual-listed in the UALR Graduate Catalog as ARHA 5306. Three credit hours.

ARHA 4307 Eighteenth and Nineteenth-Century Art in Europe
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, and architecture in Europe during the eighteenth and nineteenth centuries. Dual-listed in the UALR Graduate Catalog as ARHA 5307. Three credit hours.
ARHA 4308 Twentieth-Century Painting, Sculpture, and Graphic Arts Since 1945
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, and graphic arts from 1945 to the present. Dual-listed in the UALR Graduate Catalog as ARHA 5308. Three credit hours.

ARHA 4309 History of Arkansas Architecture
Prerequisite: ARHA 2311 or consent of instructor. The development of architecture in Arkansas from its origins to the present. Dual-listed in the UALR Graduate Catalog as ARHA 5309. Three credit hours.

ARHA 4310 Modern Architecture
Prerequisite: ARHA 2301. A study of the modern architectural developments in Europe and American architecture from 1900 to the present. The focus will be upon European architecture from 1900 to 1930, and upon architecture in the U.S. from 1930 to 1970. Consideration will be given to both technological innovations and to issues current in architectural design, such as preservation and adaptive reuse of historic buildings. Dual-listed in the UALR Graduate Catalog as ARHA 5310. Three credit hours.

ARHA 4315 Special Topics in Art History
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, architecture in northern Europe (the Netherlands, France), Spain, and Italy from 1600 to c. 1725. Dual-listed in the UALR Graduate Catalog as ARHA 5315. Three credit hours.

ARHA 4384 Baroque Art
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, and architecture in northern Europe (the Netherlands, France), Spain, and Italy from 1600 to c. 1725. Dual-listed in the UALR Graduate Catalog as ARHA 5384. Three credit hours.

ARHA 4385 Seminar in Italian Renaissance and Baroque Art
Prerequisite: ARHA 2311 or consent of instructor. Directed research for advanced students on various problems of Italian Renaissance or Baroque art from c. 1300 to 1725. Taught by the seminar method. Three credit hours.

ARHA 4386 Problems in Northern European Renaissance and Baroque Art
Prerequisite: ARHA 2311 or consent of instructor. Directed research for advanced students on various problems of northern European art. Taught by the seminar method. Three credit hours.

ARHA 4387 Late Nineteenth- and Early Twentieth-Century Art in Europe
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, art and architecture from the postimpressionist period until WW II. Dual-listed in the UALR Graduate Catalog as ARHA 5387. Three credit hours.

ARHA 4388 Problems in Modern Art
Prerequisite: ARHA 2311 or consent of instructor. Discussion of selected problems in painting, sculpture, or architecture of the eighteenth, nineteenth, or twentieth centuries. Taught by the seminar method. Three credit hours.

ARHA 4310 Special Topics in Art History
Prerequisite: ARHA 2311 or consent of instructor. Painting, sculpture, or architecture of the eighteenth, nineteenth, or twentieth centuries. Taught by the seminar method. Three credit hours.

ARHA 4191, 4291, 4391 Independent Study
Prerequisite: consent of Department of Art faculty. Open only to superior students who seek to do special research on a topic selected in consultation with the instructor. One, two, or three hours credit.

Studio Art (ARST)
Each studio art credit hour requires three clock hours of work each week. Two of these three are scheduled and the additional hour occurs in the open studio workspace. Each studio is scheduled to be open for these additional hours.

ARST 1310 Basic Drawing
A beginning course in drawing with attention to the formal elements of shape, line, value, and texture; composition and perspective; drawing from still life, landscape, the figure (draped and undraped), and other subject matter. Three credit hours.

ARST 1315 Two-Dimensional Design
Introduction to concepts of design in visual art. Emphasis on two-dimensional forms. Recommended for non-art majors who want to take some studio art courses. Three credit hours.

ARST 2310 Figure Drawing
Prerequisite: ARST 1310. Introduction to figure drawing; emphasis on anatomy, composition, and orientation to media. Three credit hours.

ARST 2315 Three-Dimensional Design
Prerequisite: ARST 1315. Concepts of three-dimensional design. Emphasis on both form and content. Three credit hours.

ARST 2318 Designing with New Technologies
Problems in design utilizing new technologies for the visual artist. Emphasis on computer-aided imagery. Three credit hours.

ARST 3310 Advanced Drawing I
Prerequisite: ARST 2310. An advanced course with emphasis on invention and personal creative investigation. Three credit hours.

ARST 3312 Crafts I
Prerequisite: ARST 2315. The application of two- and three-dimensional design principles to projects in enameling and jewelry making. Three credit hours.

ARST 3320 Painting I
Prerequisites: ARST 1310, 1315; or consent of instructor. Introduction to painting in oil from still life, landscape, the figure, and other subject matter. Three credit hours.

ARST 3321 Painting II
Prerequisite: ARST 3320. Exploration of expressive painting in choice of media. Three credit hours.

ARST 3322 Watercolor I
Prerequisite: ARST 3320. Development of skills in watercolor painting, using transparent and opaque pigments. Three credit hours.

ARST 3330 Printmaking I
Prerequisites: ARST 1310, 1315. Introduction to woodcut and etching-intaglio. Three credit hours.

ARST 3331 Printmaking II
Prerequisite: ARST 3330. Introduction to silk-screen and lithography. Three credit hours.

ARST 3340 Graphic Design I
Prerequisites: ARST 1310, 2310; 1315; or consent of instructor. Instruction in the aesthetic, creative, and technical aspects of graphic design. Three credit hours.

ARST 3341 Graphic Design II
Prerequisite: ARST 3340 or consent of instructor. Instruction in the production aspects of graphic design, i.e., type spacing, mechanicals, color separation, printing procedures, etc. Three credit hours.

ARST 3343 Graphic Design Principles
An introduction to basic art and graphic design theory. Emphasis on the knowledge and ability to work with advertising artists. Art majors may not take this course for credit. Students are advised to take ADVT 3300 as background. Three credit hours.

ARST 3350 Ceramics I
An introductory course in creative clay processes. Emphasis on hand-building techniques and basic glazing and glaze preparation. Three credit hours.

ARST 3351 Ceramics II
Prerequisite: ARST 3350. Further study in the medium of clay, with emphasis on the use of the potter’s wheel. Introduction of reduction glazes and firing of the kiln. Three credit hours.

ARST 3360 Sculpture I
Prerequisite: ARST 2315. Basic additive, subtractive, reproductive, and fabricative procedures in problems using clay modeling, wood or stone carving, mold making, plaster casting, and steel welding. Three credit hours.

ARST 3361 Sculpture II
Prerequisite: ARST 3360. Clay, plaster, and wax studies from the human head and figure, including mold making and casting techniques. Three credit hours.

ARST 3370 Photography I
The basic tools, materials, and techniques of black and white photography. The assignments are designed to develop skill in camera operation and darkroom processes, with emphasis on the aesthetics of design, personal expression, and communication for the fine artist and graphic designer. Three credit hours.
ARST 3371 Photography II
Prerequisite: ARST 3370. An overview of various modes of photographic expression, including documentary, metaphorical, directional, and conceptual imagery. Students continue to develop technical skills using black and white materials. Three credit hours.

ARST 3380 Illustration I
Prerequisites: ARST 1310, 1315, 2310; or consent of instructor. Instruction in academic drawing with emphasis on three-point and curvilinear perspective, as well as simulation of volume and space. Three credit hours.

ARST 3381 Illustration II
Prerequisite: ARST 3380 or consent of instructor. ARST 3320 Painting I is recommended. Instruction in academic painting theory with emphasis on simulation of volume and space through hue, value, and chroma. Three credit hours.

ARST 3385 Vector Graphics for Illustrators and Designers
Prerequisite: ARST 2318 or consent of the instructor. A study of computer illustration software covering the most popular vector illustration programs in use today. Emphasis on aesthetic judgment and technical proficiency in developing works of art for illustration and design portfolio. Three credit hours.

ARST 3386 Digital Imaging for Illustrators and Designers
Prerequisite: ARST 2318 or consent of the instructor. Professional Studio techniques in Adobe Photoshop® and supplemental programs. Emphasis is placed on technical proficiency and production techniques for print and web site design. Three credit hours.

ARST 4305 Professional Skills in the Visual Arts
Preparation for professional career as an artist. Includes career analysis, résumé writing, portfolio presentation, mock interview, proposal presentation, gallery relationships, photographing and shipping art work, contracts, competitions, and general problems confronting those who pursue careers in the visual arts. Dual-listed in the UALR Graduate Catalog as ARST 5305. Three credit hours.

ARST 4310 Advanced Drawing II
Prerequisite: ARST 3310 or consent of instructor. Exploration of perceptual and conceptual issues in drawing, including study of contemporary artists and trends to stimulate self-directed projects. Three credit hours.

ARST 4311 Advanced Drawing III
Prerequisite: ARST 4310 or consent of instructor. A continuation of issues introduced in Advanced Drawing II. Students will continue to expand their work in the context of current issues, aesthetic trends, and the current cultural milieu. Three credit hours.

ARST 4312 Advanced Drawing IV
Prerequisite: ARST 4311 or consent of instructor. The focus of this course is the continuance of previous research and self-directed study in drawing and preparation of works for the senior exhibition. Three credit hours.

ARST 4115, 4215, 4315 Advanced Problems in Design
Experimental materials and techniques in two- and three-dimensional design, including the correlation of visual design elements with those of various multidimensional work not usually covered by normal course offerings. Course content, subtitle, and organization vary. One, two, or three credit hours.

ARST 4320 Painting II
Prerequisite: ARST 3321. A beginning opportunity for the development of personal imagery and concepts in parallel development with continuing materials skills. Three credit hours.

ARST 4321 Painting IV
Prerequisite: ARST 4320. An advanced opportunity for personal painting investigation. Three credit hours.

ARST 4322 Watercolor II
Prerequisites: ARST 3320, 3322. Continuation of ARST 3322. Emphasis on experimental and expressive techniques in watercolor. Three credit hours.

ARST 4323 Painting V
Prerequisite: ARST 4321. Students will study various directions and concepts in painting while focusing on the establishment of an individual painting philosophy. Three credit hours.

ARST 4324 Painting VI
Prerequisite: ARST 4323. A continuation of previous research and self-directed study in painting, as well as preparation of works for the senior exhibition. Three credit hours.

ARST 4330 Printmaking III
Prerequisite: ARST 3330, 3370. Color printmaking and photo techniques. Three credit hours.

ARST 4331 Printmaking IV
Prerequisite: ARST 4330. Instruction in advanced etching-intaglio techniques to include traditional methods, simultaneous multiple color printing, and multiple plate processes. Technical analysis of professional artist’s prints will be integrated into the course. Three credit hours.

ARST 4332 Printmaking V
Prerequisite: ARST 4330 or consent of instructor. Instruction in new technological developments in fine arts printmaking to include editioning methods and print publishing practices. Course offerings will remain current with the advancement of new technologies. Three credit hours.

ARST 4340 Graphic Design III
Prerequisite: ARST 3341 or consent of instructor. Instruction in varied aspects of graphic design theory, with emphasis on visual communication, client restrictions, and deadlines. Three credit hours.

ARST 4341 Graphic Design IV
Prerequisite: ARST 4340 with a B or greater or consent of instructor. Advanced graphic design theory with emphasis on work assignments from clients in the community and creation of a portfolio for employment. Three credit hours.

ARST 4348 Production Design for the Internet
Prerequisite: ARST 2318 or consent of the instructor. A study of computer software as tools for the graphic designer in the web design industry. Students complete a series of projects illustrating the different design and production capabilities of individual software programs and their interrelationships. Students produce a variety of projects, from small scale graphics to complete web sites. Three credit hours.

ARST 4350 Ceramics Techniques
Prerequisite: ARST 3351. Emphasis on clay as an expressive medium, stressing sculptural rather than functional concepts. Continued experience with glazes and kiln firing. Three credit hours.

ARST 4351 Intermediate Ceramics Studio
Prerequisite: ARST 4350 or consent of instructor. An advanced ceramics course with emphasis on creative use of clay as a sculptural medium; continued experience with glazes and kiln firing. Three credit hours.

ARST 4352 Advanced Ceramics Studio
Prerequisite: ARST 4351 or consent of instructor. Ceramics for the advanced art student. Continued study in ceramics as a creative sculptural medium rather than functional uses of clay. Advanced study in kiln construction, firing, and glazing techniques, such as salt glazes. Three credit hours.

ARST 4360 Sculpture III
Prerequisite: ARST 3360. Explorations in kinetics, sound and light sculpture. A multimedia approach stressing contemporary issues in the field. Three credit hours.

ARST 4361 Sculpture IV
Prerequisite: ARST 3360. Environmental and site-specific sculpture, employing photographs of urban and outdoor sites, maquette making, and montage. Three credit hours.

ARST 4362 Sculpture V
Prerequisite: ARST 3361. Preparation for hot-metals casting. Includes wax pattern making, spruing and venting, ceramic shell, and investment mold making. Three credit hours.

ARST 4363 Sculpture VI
Prerequisite: ARST 4362. Investment burnout, casting in aluminum or bronze, divestment, chasing, and patination procedures. Completes preparatory work begun in Sculpture V. Three credit hours.

ARST 4370 Professional Photo Techniques
Prerequisites: ARST 3370, ARST 3371. Overview of the skills required for successful portrait, commercial, and architectural photography. Professional equipment is provided. May be repeated once for additional credit. Three credit hours.

ARST 4371 Alternative Photo Methods
Prerequisites: ARST 3370, ARST 3371. Exploration of alternative methods of photographic image making. Assignments challenge each student to question traditional techniques and materials. Three credit hours.

ARST 4372 Digital Color Photography
Prerequisites: ARST 3370, ARST 3371. An introduction to digital photography using traditional color films and digital printing techniques. Emphasis on the expressive use of color. Students use traditional cameras. Digital printing facilities are provided. Three credit hours.

ARST 4373 Advanced Problems in Photography
Prerequisites: ARST 4370, ARST 4371, ARST 4372 or permission of the instructor based upon demonstrated equivalent experience. The further exploration of concepts introduced in other photography courses. Individual assignments based on each student’s previous experience and interest. May be repeated for additional credit. Three credit hours.

ARST 4380 Illustration III
Prerequisite: ARST 3381 or consent of instructor. Instruction in varied aspects of illustration theory with emphasis on individual style, client restrictions, and deadlines. Three credit hours.

ARST 4381 Illustration IV
Prerequisite: ARST 4380 with B or greater or consent of instructor. Advanced illustration theory with emphasis on work assignments from clients in the community and creation of a portfolio for employment. Three credit hours.

ARST 4192, 4292, 4392 Independent Study
Open only to the advanced student who seeks to do special research on a subject selected in consultation with the instructor. Admission to this course must be approved by the art department before registration. One, two, or three hours credit.
Courses in Studio Art - Applied Design Track (ARAD)

**ARAD 3301 Introduction to Blacksmithing**
Prerequisite: ARST 2315 and ARST 3360. This course will focus on basic blacksmithing techniques such as how to light a coal fire, connecting multiple pieces of stock using traditional blacksmithing processes, basic forging skills and a working knowledge of how to properly operate all equipment in the studio. Three credit hours.

**ARAD 3302 Introduction to Jewelry and Metalsmithing**
Prerequisites: ARST 2315 and ARST 3360. This course will teach basic metalsmithing and jewelry making techniques. Craftsmanship and problem solving will be strongly emphasized. Students will expand their ability to effectively speak about their work and evaluate the work of others. Three credit hours.

**ARAD 3303 Introduction to Furniture Design**
Prerequisites: ARST 1310 and ARST 2315. A beginning course in the fundamentals of furniture design and construction. Students will design multiple furniture items and develop working drawings and scale models; learn basic material selection; and employ appropriate wood joinery and finishing. The course will require the use of hand and power tools while constructing a basic freestanding bench and table. Three credit hours.

**ARAD 3305 Surface Design**
Prerequisites: ARST 2315 and ARST 3312. This course is designed to teach surface design techniques on fabric and other fiber surfaces used in production fibers. Students will develop surface design techniques including but not limited to the use of stamping, silk screening basics, discharge dyes, fabric paint, beading, stitchery, and collage. Three credit hours.

**ARAD 3306 Introduction to Weaving**
Prerequisites: ARST 2315 and ARST 3312. This course will teach basic off-loom and loom weaving techniques. Students will learn the basic steps in the weaving process, selection of yarns, reading pattern drafts and finishing techniques. A historical perspective of weaving will be included along with research of fiber artists. Three credit hours.

**ARAD 3307 Functional Ceramic Techniques and Technology**
Prerequisite: ARST 3331. This course focuses on the exploration of functional ceramics through a variety of advanced forming and finishing techniques to assist with a production oriented studio methodology. By using traditional based processes, students will build a greater proficiency in ceramic firing, and clay and glaze technology for functional ware. Three credit hours.

**ARAD 3308 Ceramic Design**
Prerequisite: ARST 3307. This course focuses on technical and professional skills needed to maintain a crafts studio. Glazing and firing proficiency specific for an active production studio will be explored. This research experience will provide students the background for what is needed to become a working craftsperson in the ceramic field. The course will be a concentrated investigation of craft theory and self-initiated projects to build a personal approach to utilitarian ceramics. Three credit hours.

**ARAD 4301 Intermediate Blacksmithing**
Prerequisite: ARAD 3301. This course will explore the many possibilities of what blacksmithing can be in contemporary forge work. An emphasis will be placed on the use of traditional techniques whenever possible. Various hot forging methods, fabrication processes, welding and limited use of machinery methods will be explored. Three credit hours.

**ARAD 4302 Intermediate Jewelry and Metalsmithing**
Prerequisite: ARAD 3303. This course will explore the creative potential of jewelry and metalsmithing through traditional and non-traditional techniques. Emphasis will be placed on craftsmanship, complex soldering operations and mechanical joining as well as sheetmetal forming and wire forging. Surface embellishment and a variety of finishing techniques will be used to create distinctive final pieces. Three credit hours.

**ARAD 4303 Case Furniture Design and Construction**
Prerequisite: ARAD 3303. An advanced course in furniture design and construction. Students will be introduced to basic wood box and cabinet design and construction. Students will design multiple furniture items and develop working drawings and scale models, practice appropriate material selection; and employ complex wood joinery and finishing. The course will require the use of hand and power tools while constructing a free standing shelving unit and a wall mounted or free standing cabinet with doors and drawers. Three credit hours.

**ARAD 4304 Complex Furniture Design and Construction**
Students will be introduced to ergonomic considerations in the design and construction of a chair. Students will develop working drawings and a scale model; practice appropriate material selection; and employ complex wood joinery and appropriate finishing. The course will require the use of hand and power tools while constructing a chair of unique or historical design integrating at least one material in addition to wood. Three credit hours.

**ARAD 4306 Intermediate Weaving**
Prerequisite: ARAD 3306. This course will include multi-harness loom weaving techniques. Students will learn advanced weaving processes, selection of yarns, reading and designing pattern drafts and finishing techniques. Use of computer-assisted draft designs and weaving on a compu-dobby production loom will be included in this course. A historical perspective of weaving will be included along with research of fiber artists. Three credit hours.

**ARAD 4307 Ceramics Studio Practice**
Prerequisite: ARAD 3308. This course will allow students to concentrate on the production of a body of functional ceramics. This approach will enable students to create a personal body of work and documented portfolio that is applicable for the consumer market. Within this continued research, students will generate and expand an independent studio practice and work ethic that will sustain craftsmanship and creative development while refining efficiency and focus on a mature line of marketable work. Three credit hours.

**ARAD 4398, 4698 Applied Design Internship**
Prerequisite: Departmental approval. This experience will provide students with a supervised, practical experience to put into practice the skills learned in the academic setting. It will develop aspects of the art profession appropriately learned in real work situations. It will provide an opportunity for art students to work under the supervision of a professional artist. Three or six credit hours.
An introduction to telescopes, the apparent movements of the sun, and constellations. Special facilities include the 12-inch computer-controlled telescope with electronic camera and the Planetarium. The course includes lectures, discussions, demonstrations, and laboratory experiments. Offered rights only. One credit hour.

ASTR 1101 Introduction to Astronomy Laboratory
Prerequisite or corequisite: ASTR 1301 or 1311. A laboratory course designed to accompany ASTR 1301. A variety of activities in data acquisition and analysis which tie concepts discussed in the classroom to real-world experiences. Open laboratory, the planetarium, and observatory activities. One credit hour.

ASTR 1301 Introduction to Astronomy
Study of the process of science by which knowledge about our place in the cosmos is obtained. Examples of possible observations and the inferences drawn from them. Emphasis on how we obtain our knowledge and the certainty of various parts of it. A core curriculum course. Three credit hours.

ASTR 1311 Cosmos
A survey of the changing concepts of the origins and evolution of the universe and life and of our place in it, from the early Greeks to the present, based on the television series, "Cosmos." Includes treatments of the historical development of astronomy, of the physical forces that determine the evolution of the planets, stars, and universe, and of the history and future of space exploration. Three hours lecture. Three credit hours.

ASTR 3401 Scientific Computing and Image Processing in Astronomy
Students work in a scientific computing environment using the UNIX/Linux operating system. Professional image processing software is used to analyze astronomical images from real data. Extensive use is made of internet resources. An integrated self-paced course equivalent to three lecture hours and two laboratory hours per week. Four credit hours.

Astronomy (ASTR)

AUSP 2360 Introduction to Speech and Hearing Disorders
A description and discussion of speech, language, and hearing disorders; therapy surveys and assessment techniques. Three credit hours.

AUSP 3350 Phonetics
In depth study of principles of phonetics and their application to speech. Three credit hours.

AUSP 3360 Language and Speech Acquisition
Prerequisite: consent of instructor. The study of normal verbal speech and language acquisition. Three credit hours.

AUSP 3361 Speech Anatomy and Physiology
Anatomy and physiology of the speech and hearing mechanism and associated structures. Three credit hours.

AUSP 3362 Hearing Science
Prerequisite: consent of instructor. An introduction to the study of hearing. Emphasis will be given to the elements of sound, auditory physiology, psychoacoustical methods, and theories of hearing. Three credit hours.

AUSP 3363 Disorders in Articulation
Prerequisites: AUSP 2360 and 3350 or consent of instructor. Theory, evaluation, and therapeutic procedures with functional and organic articulatory and phonological disorders. Three credit hours.

AUSP 3364 Speech Science
Prerequisite: AUSP 3350. Speech as an acoustic phenomenon; special reference to voice, rate, articulation; survey of experimental literature; theoretical, practical consideration of mechanical, electrical instruments used in diagnostic, therapeutic, experimental aspects of speech pathology, audiology. Three credit hours.

AUSP 3365 Clinical Management
Prerequisite: AUSP 2360. For majors only. Clinical procedures for working in various practicum settings, using diagnostic and therapeutic techniques, writing behavioral objectives, procedures for report writing, and practical experience with clinician-made and commercial materials. First in the series of practicum courses. Three credit hours.

AUSP 4162 Practicum I
Prerequisites: AUSP 3365, consent of instructor. For majors only. Supervised clinical practice in the areas of speech and/or language disorders. Requires at least 15 client clock hours. Must be taken first in clinical practicum series. One credit hour.

AUSP 4163 Practicum II
Prerequisites: AUSP 2365, 4162, consent of instructor. For majors only. Only two practicums may be taken on the undergraduate level. One credit hour.

AUSP 4164 Practicum III
Prerequisites: AUSP 3365, consent of instructor. For majors only. Supervised clinical activity in specialized areas. Requires 60 client clock hours. Only two practicums may be taken on the undergraduate level. One credit hour.

AUSP 4363 Voice and Stuttering Disorders
Prerequisites: AUSP 2360, 3361, 3350, or consent of instructor. Etiology, evaluative, and therapeutic procedures for persons with voice disorders and with various types of verbal disfluency behaviors. Three credit hours.

AUSP 4364 Differential Diagnosis of Speech and Language Disorders
Prerequisites: AUSP 2360, 3360, 3363, or consent of instructor. Interview and test procedures used in evaluating speech and language disorders. Emphasis on use and interpretation of standardized test measures. Three credit hours.

AUSP 4366 Language Disorders
Prerequisite: AUSP 3360 or consent of instructor. Language disorders in adults and children including types of language disorders, etiology, neurological and theoretical correlates, diagnostic procedures and test interpretation, and treatment protocols. Dual-listed in the UALR Graduate Catalog as AUSP 5366. Three credit hours.

AUSP 4368 Audiology
Prerequisite: AUSP 3362. Principles of auditory reception; the hearing mechanism; problems involved in measuring, evaluating, and conserving hearing. Clinical observation. Dual-listed in the UALR Graduate Catalog as AUSP 5368. Three credit hours.

AUSP 4369 Audiologic Rehabilitation
Prerequisite: AUSP 2360, 4368, or consent of instructor. Principles of audiologic habilitation/rehabilitation with infants, children, and adults with hearing loss. Discussion of communication and education options for children with hearing loss, counseling techniques, communication strategies, and the use of amplification and other assistive technologies. Three credit hours.

AUSP 4101, 4201, 4301 Independent Study
Students will read and research in a selected area of communicative disorders. Projects and papers must be approved by the instructor before registration. One, two, or three credit hours.
Bioinformatics (BINF)

**BINF 2345 Introduction to Bioinformatics**
Prerequisites: MATH 1302 and computer literacy or consent of instructor. This course introduces the student to bioinformatics: the application of information science to studies in the life sciences. Through a survey of the basic sciences influencing computational biology and an overview of information science strategies applicable to the life, medical, and health sciences, an interdisciplinary approach to understanding the evolving field of bioinformatics is developed. Two hours of lecture and two hours of laboratory per week. Three credit hours.

**BINF 4445 Bioinformatics Theory and Applications**
Prerequisites: Consent of instructor or the following: BIOL 3300, IFSC 3320, IFSC 2300, and STAT 3352 or equivalents. BINF 2345 is recommended. An overview of concepts central to the study and application of bioinformatics drawing upon the fields of biostatistics, computer and information science, and the life sciences. Dual-listed in the UALR Graduate Catalog as BINF 5445. Three hours of lecture, and two hours laboratory per week. Four credit hours.

Biology (BIOL)

**Biology (BIOL)**

Note: a number of biology courses are offered alternate years. Check with department for course offerings.

**BIOL 1102 Introductory Biology Laboratory**
A laboratory course in introductory biology covering the general concepts of microscope use, cell organization, physical and chemical bases of life, energy processing, cell reproduction, plant tissue structures, animal structures, organismic reproduction and development, genetics, and evolution. Offered only to students who have transfer credit for three credit hours of introductory biology lecture or the equivalent. Two hours laboratory per week. One credit hour.

**BIOL 1400 Evolutionary and Environmental Biology**
Evolutionary, ecological, and environmental interrelationships among organisms. Basic biological principles and modern technology form the basis for inquiry and debate. The impact of society upon global biodiversity is examined from competing viewpoints. The role of science in shaping society and the influence of society upon science are evaluated. Students learn through reading, writing, computer simulations, videos, field exercises, and through participation in critical thinking and problem-solving activities. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 1401 Science of Biology**
The process of science, including observation, evaluation, and predictions, will be applied to the understanding of biological principles. Illustration of the methods of science in the study of major biological concepts, including the cell theory, energy transformation, inheritance, and the theory of evolution. Selected biological systems will be surveyed to compare life forms and to examine related human issues. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 1411 Introduction to Human Anatomy and Physiology I**
The first semester of a two-semester course emphasizing the anatomy and physiology of the human organism. After an introduction, the following topics will be discussed: basic chemistry, cell biology, histology, integumentary system, skeletal system, nervous system, and sensory system. This course cannot be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 1412 Introduction to Human Anatomy and Physiology II**
Prerequisite: Biology 1411 or consent of instructor. The second semester of a two-semester course emphasizing the anatomy and physiology of the human organism. The muscular, digestive, respiratory, circulatory, lymphatic, urinary, reproductive, and endocrine organ systems will be covered during this term. This course cannot be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory. Four credit hours.

**BIOL 1413 Human Biology**
A study of the structure and function of the human body, including the basic anatomy and physiology of the various body systems. Special attention will be given to methods of promoting and ensuring the well-being of the human organism. Designed for general students who want practical information about their bodies. This course is not intended for students majoring in nursing nor can it be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 2301 Environment and Man**
A study of the relationship between humans and the natural environment. Characteristic animal and plant life in broad areas of nature and the influence individuals exert on these organisms; population and environmental problems humans have created, with the possible implications for the future and corrections which must be faced. Three hours lecture. Credit not applicable toward a biology major. Three credit hours.

**BIOL 2400 Human Microbiology**
A study of microbiological principles and those microorganisms relating to humans and their environment. This course is designed for associate degree health related programs and is not recommended to meet the requirements for a baccalaureate degree in health related professions. This course can not be used for credit toward a biology major or minor. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 2401 Microbiology**
Prerequisites: BIOL 1400 or 1401, or 1411 and 1412, CHEM 1400 or 1402, or their equivalents. The morphology, physiology, and classification of microorganisms; the relationship of microorganisms to biotechnology, medicine, and nursing. Two hours lecture, four hours laboratory per week. Four credit hours.

**BIOL 2402 Botany**
Prerequisite: BIOL 1400 or 1401 or equivalent. The structure and function of plants at the molecular, cellular, and organismal levels; survey of major plant groups. Two hours lecture, four hours laboratory per week. Four credit hours.

**BIOL 2403 Zoology**
Prerequisite: BIOL 1400 or 1401 or equivalent. A survey of the animal kingdom from microscopic forms to mammals. Acquaints the student with the nature of animals. A study of general principles including taxonomy, organ systems, similarities of structure, function, and behavior of animals. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 3100 Genetics Laboratory**
Prerequisite or corequisite: BIOL 3300. Selected experiments in genetics to emphasize techniques, analysis, and interpretation of the principles of inheritance in plants and animals. Two hours laboratory per week. One credit hour.
Prerequisites: BIOL 3400 Developmental Biology.

Prerequisite: BIOL 3401, 2403, or their equivalents. The development of organisms including the topics of gametogenesis, fertilization, cleavage, morphogenesis, organogenesis, cell differentiation, and regeneration. These topics will be approached from both the structural point of view of classical embryology and the more recent molecular mechanistic viewpoint. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3402 Mammalian Anatomy
Prerequisite: BIOL 2403. A study of the gross anatomy of mammalian organ systems with emphasis being placed on the human organism. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3404 Comparative Vertebrate Morphology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. The comparative anatomy of selected vertebrate animals, homologous structures in various animal groups. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3405 Invertebrate Zoology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. Comparative anatomy, physiology, embryology, adaptive radiation, and evolutionary relationships of invertebrate groups. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3406 Entomology
Prerequisites: BIOL 1400 or BIOL 1401, BIOL 2403, or equivalents. A study of insects including their anatomy, physiology, behavior, development, diversity, classification, and economic importance. Three hours lecture, two hours laboratory. Four credit hours.

BIOL 3407 Plant Morphology
Prerequisites: BIOL 1400 or 1401, 2402, or their equivalents. A lecture-laboratory course covering the fundamental morphological characteristics of plants. The life histories and habits of the major plant groups are covered. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3408 Vertebrate Histology
Prerequisites: BIOL 1400 or 1401, 2403, or BIOL 1411 and 1412, or their equivalents. A study of the cell and fundamental tissues; the microscopic structure of the organ systems of representative vertebrates, and emphasis on the relationship between microscopic structure and function. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 3409 Vertebrate Zoology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. A general study of vertebrates, including adaptations, reproduction, behavior, distribution, ecology, and taxonomy. Emphasis on Arkansas species and field studies. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3411 Dendrology
Prerequisites: BIOL 1400 or 1401, 2402, or their equivalents. Detailed coverage of tree and other woody plant identification, recognition, classification, silvics, range, economic use, and wildlife value of native and introduced North American species. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 3199, 3299, 3399, 3499 Special Topics
Prerequisites: variable, depending on instructor and course content. Each special topics course must first be approved by the biology department, which will also decide if credit can be granted. The topics will represent specialized areas of study in the biological sciences. Credit will vary and will depend on the amount of time necessary to cover the topic. One to four hours lecture. One, two, three, or four credit hours.

BIOL 4190 Biology Seminar
Prerequisite: three hours of biology to include BIOL 1400 or 1401 or equivalent, four hours of chemistry; microbiology is recommended. Basic principles and theories of inheritance with applications to plant, animal, and human heredity. Emphasis on roles of DNA and RNA and the genetics of microorganisms. Three hours lecture, three credit hours.

BIOL 3303 Principles of Ecology
Prerequisite: BIOL 1400 or 1401, 2402 or 2403, or their equivalents. Recommended co-requisite: BIOL 3103. Principles of Ecology Lab. An introduction to living organisms and relationships to their environment including the structure and interactions of populations, communities, ecosystems, and the biosphere. Three hours lecture per week. Three credit hours.

BIOL 4100, 4200, 4300 Independent Study
Prerequisites: senior standing, at least 20 hours in biology, and consent of the instructor. For students who wish to conduct library studies, curate museum collections, help faculty with a variety of special projects, or perform other activities. The student is expected to spend two to four hours per week on the project 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 instructor. No more than six hours independent study, cooperative education, and/or undergraduate research may be counted for biology elective credit (see “Independent Research and Study” on page 34). One, two, or three credit hours.

BIOL 4305 Animal Behavior
Prerequisites: BIOL 1400 or 1401, 2403. Graduate standing required to enroll in 5305. Description of the known behavior of various vertebrate and invertebrate phyla with emphasis on adaptive signiﬁcance. Special attention to mating, defensive, nutritive, and social behavior. The ontogeny of behavioral patterns will be presented where known. Behavior will be related to the ecology of various animal populations. Dual-listed in the UALR Graduate Catalog as BIOL 5305. Three hours lecture per week. Three credit hours.

BIOL 4308 Wildlife Management
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. Wildlife conservation and management. Ecology, program development, and management of wildlife in relation to the objectives of consumptive and nonconsumptive interest groups. Three hours lecture per week. Three credit hours.

BIOL 4309 Wildlife Management Techniques
Prerequisites: BIOL 1400 or 1401, 2403. Techniques and equipment used to obtain biological information needed to manage wildlife on a scientiﬁc basis. Fundamental procedures of planning and conducting wildlife investigations. One hour lecture, six hours laboratory per week. Three credit hours.

BIOL 4310 Evolution
Prerequisites: BIOL 1400 or 1401 and junior standing. Graduate standing required if student enrolled in 5310. Basic principles of evolutionary biology are covered, including the Darwinian Theory, principles of inheritance, micro-evolution and specialization processes. The evolution of humans is also discussed. Dual-listed in the UALR Graduate Catalog as BIOL 5310. Three hours lecture per week. Three credit hours.

BIOL 4189, 4289, 4389 Undergraduate Research
Prerequisites: junior standing, at least 20 hours in biology, consent of the instructor. Students will design and conduct an independent scientiﬁc investigation. A paper reporting on the project in journal format is required for completion of the course. The student is expected to spend two to four hours per week on the project for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the project and will be agreed upon in advance by the student and instructor. No more than six hours independent study, cooperative education, and/or undergraduate research may be counted for biology elective credit (see “Independent Research and Study” on page 34). One, two, or three credit hours.

BIOL 4401 Cell Biology
Prerequisites: BIOL 1401 or 1401, 12 additional hours in biology, CHEM 1401 or 1403; microbiology is strongly encouraged. A study of the organization of cells as related to the structure and function of biological molecules. Emphasis is placed on eukaryotic cells. Dual-listed in the UALR Graduate Catalog as BIOL 5401. Three hours lecture, three hours laboratory per week. Four credit hours.

BIOL 4402 Limnology
Prerequisites: BIOL 1400 or 1401, 2402, 2403, 3303, CHEM 1403, or equivalents. A study of physical and chemical characteristics of water, morphometry and physiography of lake and stream basins and an introduction to the ecology and taxonomy of aquatic communities. Laboratory: Instruction in methods of physical, chemical, and biological sampling and analysis. Field work will include study of various types of aquatic habitats and sampling methods involved. Some extended Saturday field trips will be required. Dual-listed in the UALR Graduate Catalog as BIOL 5402. Two lectures, one four-hour laboratory per week. Four credit hours.

BIOL 4403 Comparative Physiology
Prerequisites: BIOL 1400 or 1401, 2403, CHEM 1403, or the equivalents. 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. Dual-listed in the UALR Graduate Catalog as BIOL 5403. Three hours lecture, three hours laboratory per week. Four credit hours.

BIOL 4404 Mammalogy
Prerequisites: BIOL 1400 or 1401, 2403, 3404 or 3409, or their equivalents, or consent of instructor. Classification, distribution, ecology, and natural history of mammals. Emphasis on Arkansas species. Field studies, preparation of study specimens. Dual-listed in the UALR Graduate Catalog as BIOL 5404. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4405 Ichthyology
Prerequisites: BIOL 1400 or 1401, 3404 or 3409. Classification, phylogeny, morphology, physiology, and ecology of fishes concentrating on North American and Arkansas freshwater fishes. Dual-listed in the UALR Graduate Catalog as BIOL 5405. Three hours lecture, three hours laboratory. Four credit hours.
BIOL 4406 Pathogenic Microbiology
Prerequisites: BIOL 1400 or 1401, 2401, or their equivalents. Survey of pathogenic microbiology, immunology, and virology with emphasis on fundamental principles of each science and their application to the diagnosis and control of human diseases. Dual-listed in the UALR Graduate Catalog as BIOL 5406. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 4407 Herpetology
Prerequisites: BIOL 1400 or 1401, 3403, 3404 or 3409, or their equivalents, or consent of instructor. Classification, anatomy, distribution, ecology, and natural history of amphibians and reptiles. Field techniques, student projects, laboratory work, and curatorial training will emphasize species found in Arkansas. Dual-listed in the UALR Graduate Catalog as BIOL 5407. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4408 Advanced Field Biology
Prerequisites: BIOL 1400 or 1401, 2402, 2403, 3303, 3409, or their equivalents. An analysis of major ecological habitats. Comparison of these areas with respect to their physiographic floral and faunal components. Emphasis on vertebrates. Students will spend an extended time in the field. Enrollment is by application only, and a separate field fee is charged. Ninety hours of lecture/laboratory/field trip activity. Four credit hours.

BIOL 4409 Plant Taxonomy
Prerequisites: BIOL 1400 or 1401, 2402 or their equivalents. A study of the principles of plant identification, classification, systematic, and nomenclature. Major families of flowering plants with emphasis on the floristics of the immediate area. Dual-listed in the UALR Graduate Catalog as BIOL 5409. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4410 Fisheries
Prerequisites: BIOL 1400 or 1401, 2403, 3303 or 3409, or their equivalents, or consent of instructor. A survey of fish management and fish culture principles and techniques including population assessment, habitat improvement, pond culture, commercial fish farming, and an introduction to fish diseases. Dual-listed in the UALR Graduate Catalog as BIOL 5410. Three hours of lecture, three hours laboratory per week. Four credit hours.

BIOL 4411 Ornithology
Prerequisites: 16 hours in biology to include BIOL 2403. 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 UALR Graduate Catalog as BIOL 5411. Three hours lecture, two hours laboratory per week. Weekend field trips. Four credit hours.

BIOL 4412 Plant Ecology
Prerequisites: BIOL 1400 or 1401, 2402 or 2403, 3303, or their equivalents. 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. Dual-listed in the UALR Graduate Catalog as BIOL 5412. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 4413 Immunum
Prerequisites: BIOL 1400 or 1401, 2401, CHEM 1402, 1403. Immunobiology and immunochemistry of humoral and cellular mechanisms of immunity. Dual-listed in the UALR Graduate Catalog as BIOL 5413. Three hours lecture, two hours laboratory per week. Four credit hours.

BIOL 4414 Biological Methods and Instrumentation
Prerequisites: junior standing (60 hours to include 20 hours of biology including 2401, 3300), eight hours of chemistry. A hands-on study of modern biological experimentation. Designed to allow students to perform experiments using radioisotopes, electrophoresis, centrifugation, chromatography, RIA, ELISA, respiratory, enzyme assays and spectrophotometric analysis, with an emphasis on computer analysis of data. Each student will complete an individual research project. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4415 Biometry
Prerequisites: 12 hours of biology, environmental health science, or earth science (in combination or singularly); MATH 1302 or higher numbered mathematics course; three hours of statistics; or consent of instructor. Graduate standing required if student enrolled in 5415. A computer based course in experimental design, data analysis, and interpretation. The objective of the course is to teach the application of statistical procedures relevant to the academic emphasis of students, not statistics per se. Designed to be especially beneficial to those students planning to seek an advanced degree upon completion of their baccalaureate or to go into quality control or research positions. Dual-listed in the UALR Graduate Catalog as BIOL 5415. Two hours lecture and four hours laboratory. Four credit hours.

BIOL 4416 Microscopy
Prerequisites: 15 hours of biology. Graduate standing if student enrolled in 5416. A laboratory course 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 epifluorescent light microscopy, and scanning and transmission electron microscopy. Strong emphasis is placed on experimental design and use of the microscope as an experimental tool. Dual-listed in the UALR Graduate Catalog as BIOL 5416. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4417 Molecular Biology
Prerequisites: 19 hours in biology including both BIOL 2401 and 3300; CHEM 1401 or 1403. Successful completion of either BIOL 3400 or 4401 is strongly encouraged. If taken for graduate credit, the prerequisites also include a BS in biology or permission of the instructor. 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. Dual-listed in the UALR Graduate Catalog as BIOL 5417. Two hours of lecture and four hours of laboratory per week. Four credit hours.

BIOL 4418 Biotechnology
Prerequisites: 19 hours of biology including 2401 and 3300; CHEM 1401 or 1403. BIOL 3400 and 4401 are strongly recommended. BIOL 4417 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. Dual-listed in the UALR Graduate Catalog as BIOL 5418. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4419 Plant Physiology
Prerequisites: BIOL 1400 or 1401, 2402, CHEM 2450, or their equivalents, or consent of instructor. Study of water relations, nutrition, and metabolism including photosynthesis, growth, and development. Dual-listed in the UALR Graduate Catalog as BIOL 5419. Two hours lecture, four hours laboratory per week. Four credit hours.

BIOL 4420 General Biochemistry
See CHEM 4420.

BIOL 4421 Introduction to Geographic Information Systems
Prerequisites: CPSIC 1270, or BIOL 4309, or ERSC 2320, or Surveying and Land Information Systems 2510, or consent of the instructor. This course serves as an introduction to automated computer mapping and spatial data base management. The laboratory features hands-on experience with commercial computer programs and stresses applications in many disciplines including field biology, hydrology, municipal government, and surveying. Two lecture hours per week, four laboratory hours. Four credit hours.

BIOL 4422 Mammalian Physiology
Prerequisites: BIOL 1400 or 1401, 2403, Chemistry 1403, or their equivalents. General physiological principles and the use of unanesthetized and restrained animals of mammalian systems. Dual-listed in the UALR Graduate Catalog as BIOL 5422. Three hours lecture, two hours laboratory. Four credit hours.

BIOL 4423 Plant Anatomy
Prerequisites: BIOL 1400 or 1401, 2402, or their equivalents. Detailed coverage of the microscopic anatomy of all the organs of seed plants and a critical evaluation of the major tissue types found within these plant organs. Dual-listed in the UALR Graduate Catalog as BIOL 5423. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4424 Entomology
Prerequisites: BIOL 1400 or 1401, 2403, or their equivalents. A study of insects including their anatomy, physiology, behavior, development, diversity, classification, and economic importance. Dual-listed in the UALR Graduate Catalog as BIOL 5424. Two hours lecture, four hours laboratory. Four credit hours.

BIOL 4199-4499 Special Topics in Biology
Prerequisites: 20 hours in biology, consent of instructor; other prerequisites may be required depending on the topic. Specialized study in the biological sciences. Credit varies and depends on the depth of the course content. Each topic is appropriate for both advanced undergraduate and graduate students. Dual-listed in the UALR Graduate Catalog at the 5000-level. One to four hours lecture per week combined with up to four hours laboratory. One, two, three, or four credit hours.
Gulf Coast Research Laboratory Courses (BIOL)

**BIOL 3450 Introduction to Marine Zoology**
Prerequisite: eight hours of biological science. A general introduction to the marine environment with emphasis on local fauna. Introduction to the marine environment and some of its physical, chemical, geological, and ecological characteristics that affect marine life. Emphasis on local fauna and estuarine species. Four credit hours.

**BIOL 3550 Oceanography II: Marine Biology**
Prerequisite: eight credit hours of biological science. An overview of biological oceanography with emphasis on organisms, habitats, and fisheries of the Mississippi Sound and the Gulf of Mexico. Five credit hours.

**BIOL 4151, 4251, 4351 Special Problems in Marine Science**
Prerequisites: to be set by problem director. Special problems are research oriented, and grades are based on reports submitted by students. Students who want to take a special problems course must submit a brief proposal of planned study to the GCRL registrar. Special problems proposal forms are available from the GCRL registrar. This proposal must be approved by the student’s UALR advisor and the GCRL staff member directing the study. One, two, or three credit hours.

**BIOL 4352 Coastal Vegetation**
Prerequisite: 10 hours of biology including general botany. A broad study of the general and specific aspects of coastal vegetation, with emphasis on local examples such as tidal marshe, swamps, savannahs, woodlands, strand and island (insular) vegetation, and certain unique and peculiar areas. Vegetational composition, variation, succession, clams, and distribution, including survey and descriptive methods. Aerial techniques, ground truth, plant identification, delineation of vegetational types, and mapping. Three credit hours.

**BIOL 4450 Marine Botany**
Prerequisite: 10 credit hours of biology, including botany. A survey, based on local examples, of the principal groups of marine algae and marine flowering plants, treating structure, reproduction, distribution, identification, and ecology. Four credit hours.

**BIOL 4451 Comparative Histology of Marine Organisms**
Prerequisites: general histology, consent of instructor. A detailed study of the histological organization of representative marine organisms. Fixation, processing, and study of tissues using light microscopy, transmission electron microscopy, and scanning electron microscopy. The relationship between structural changes and physiological changes during life cycle of organism. Histopathology with respect to tissue responses to infection and damage by toxic agents. Four credit hours.

**BIOL 4452 Marine Fisheries Management**
Prerequisite: 16 hours of biological science or consent of instructor. Practical marine fishery management problems. Trends in human population numbers, aggregations, and life styles with associated environmental impacts and resource allocation implications, which pose complex problems for fishery management scientists and administrators. International and local legal, political, social, and economic factors, as well as biological potential, must be considered in making rational decisions toward achieving optimum yield from marine fishery resources. The history of management scheme successes and failures, sources of information, and the current status of fishing technology, mariculture, management methods, legal problems, and educational needs will be explored. Four credit hours.

**BIOL 4453 Behavior and Neurobiology of Marine Animals**
Prerequisite: 16 credit hours of zoology or consent of instructor. Survey of behavior, neuroanatomy, and neurophysiology of marine animals with emphasis on the neural mechanisms underlying the behavior of selected invertebrates, fishes, birds, and mammals. Introduction to the experimental study of the behavior of marine animals in the field and laboratory. When possible, students will carry out independent studies on local species. Neural mechanisms underlying behavior; the anatomy and physiology of the nervous systems of marine invertebrates and vertebrates. Four credit hours.

**BIOL 4454 Fauna and Faunistic Ecology of Tidal Marshes**
Prerequisite: 16 credit hours of biological science or consent of instructor. Survey and discussion of the taxonomy, distribution, trophic relationships, reproductive strategies, and adaptations of tidal marsh animals with emphasis on those occurring in northern Gulf marshes. Four credit hours.

**BIOL 4455 Early Life History of Marine Fishes**
Prerequisites: ichthology, fisheries, biology, ecology, or consent of instructor. Reproductive strategies and early developmental processes of marine fishes. Includes discussion of temporal and spatial distribution patterns, population dynamics, and ecological interactions of fish eggs and larvae; role of early stages of fishes in fisheries oceanography, marine ecology, and systematics; methods of sampling and identifying fish eggs and larvae; data quantification and analysis; rearing experiments; techniques for studying larval fish dynamics. Four credit hours.

**BIOL 4456 Salt Marsh Plant Ecology**
Prerequisites: general botany, plant taxonomy, plant physiology, general ecology, or consent of instructor. Botanical aspects of local marshes. Plant identification, composition, structure, distribution, and development of coastal marshes. Biological and physical interrelationships. Primary productivity and relation of marshes to estuaries and associated fauna. Four credit hours.

**BIOL 4550 Marine Microbiology**
Prerequisites: general microbiology, consent of instructor. Introduction to marine microorganisms and pertinent literature sources. The role of microorganisms in the ecology of oceans and estuaries is stressed. Use of laboratory sampling equipment, methods of processing samples, and laboratory techniques useful in studying marine microorganisms. Five credit hours.

**BIOL 4551 Marine Ecology**
Prerequisites: 16 credit hours of biological science including general zoology, general botany, and invertebrate zoology. A consideration of the relationship of marine organisms to their environment. The effects of temperature, salinity, light, nutrient concentration, currents, food, predation, and competition on the abundance and distribution of marine organisms are considered. Five credit hours.

**BIOL 4650 Marine Invertebrate Zoology**
Prerequisites: 16 credit hours of zoology, including an introductory course in invertebrate zoology. A concentrated study of the important free-living marine and estuarine invertebrates of the Mississippi Sound and adjacent continental shelf of the northeastern Gulf of Mexico, with emphasis on the structure, classification, phylogenetic relationships, larval development, and functional processes. Six credit hours.

**BIOL 4651 Marine Vertebrate Zoology and Ichthyology**
Prerequisites: 16 credit hours of zoology including comparative morphology or consent of instructor. A general study of the marine chordata, with emphasis on fish including lower groups, mammals, and birds. Groups of vertebrates occurring in the area associated with marine environments, with taxonomic characteristics used in their classification and identification, and with functional adaptations of the organisms. Greatest emphasis is placed on local fishes. For obvious reasons, no conscious attempt is made to duplicate material which could be offered with ease to the student at his or her home institution. Every effort is made to take advantage of the unique teaching situation that the area provides. Six credit hours.

**BIOL 4652 Parasites of Marine Animals**
Prerequisites: general parasitology or consent of instructor. A study of the parasites of marine and estuarine animals with emphasis on morphology, taxonomy, life histories, and host-parasite relationships. Six credit hours.

**BIOL 4653 Aquaculture**
Prerequisites: 16 credit hours of biology, including invertebrate zoology, natural history of vertebrates, or ichthyology. A review of the technology, principles, and problems relating to the science of aquaculture, with emphasis on the culture of marine species. Six credit hours.
BIOM 3210 Laboratory Principles and Techniques
Prerequisite: admission to the professional program in medical technology or molecular biotechnology. Introduction to principles and techniques used in clinical and research laboratories. Emphasis on laboratory mathematics, safe practices, and basic instrumentation. Two hours lecture per week.

BIOM 3211 Introduction to Research
Prerequisite: admission to the professional program in medical technology or molecular biotechnology. How to design, conduct, and interpret life science research including planning biomedical research, the principles of statistical design, sample size estimation, and designs in life science research. Also includes the correspondence between objectives, design and analysis. Two lecture hours per week.

BIOM 4106 Technology Transfer
Prerequisites: admission to the professional program in molecular biotechnology and UALR BIOL 4417 and BIOL 4418. Overview of the conversion from research to manufacturing, including regulatory environment in which the production occurs. One hour lecture.

BIOM 4305 Cell Culture Principles and Techniques
Prerequisites: admission to the professional program in molecular biotechnology and UALR BIOL 4417 and BIOL 4418. Introduction to principles and techniques of cell culture. Explores protocols for the culture, cloning, and selection of cells. Includes basic cell biology, growth characteristics and requirements, cell passing, and quantitation. Two hours lecture, three hours laboratory per week.

BIOM 4507 Biotechnology Laboratory Internship
Prerequisites: admission to the professional program in molecular biotechnology and UALR BIOL 4417 and BIOL 4418. Supervised experience in a biotechnology research laboratory. Emphasis on manual and automated techniques and development of professional behavior. Includes research principles and techniques, laboratory organization, and materials management. Twenty clinic hours per week.

Chemistry (CHEM)

Lab Science Requirement Courses

CHEM 1100 Introductory Chemistry Laboratory
A laboratory course in which experiments are performed to demonstrate principles covered in an introductory course, such as CHEM 1400, 1402, or 1409. It is offered only to students with transfer credit for three hours of introductory chemistry lecture. This course may be taken only one time for credit. Laboratory three hours per week. One credit hour.

CHEM 1300 Preparation for General Chemistry
Prerequisite or corequisite: two years of high school algebra, MATH 0301, or equivalent. This course cannot be combined with CHEM 1100 to satisfy four hours of the lab science requirement in the University core curriculum. Preparation for general chemistry. Introduction to basic chemical concepts plus a review of the applied mathematics pertinent to freshman chemistry. Lecture three hours per week. Three credit hours.

CHEM 1400 Fundamental Chemistry I
Prerequisite: MATH 0301 or equivalent. Basic principles, theory, and laboratory practices in chemistry. Designed especially for students who need no more than three semesters of college chemistry (nursing, dental hygiene, agriculture, physical therapy, respiratory therapy, etc.). With CHEM 1401, it serves as the foundation of routine techniques and the necessary chemical knowledge for all sciences. Corequisite: CHEM 2450, but may be taken as a pre- or corequisite. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1401 Fundamental Chemistry II
Prerequisite: CHEM1400 or equivalent. Introduction to basic principles, theory, and laboratory practices of organic and biochemistry. This course serves as a prerequisite to CHEM 2450 only. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1402 General Chemistry I
Prerequisites: high school chemistry or CHEM 1300; two units of high school algebra or MATH 0301. Students are urged to take MATH 1302 concurrently. Fundamental laws and theories of chemistry from a physical-inorganic viewpoint, including atomic structures and the periodic table, chemical bonding, and solutions. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1403 General Chemistry II
Prerequisite: a grade of C or greater in CHEM 1402 or equivalent. Continuation of CHEM 1402. Topics include equilibrium, thermodynamics, kinetics, acid-base chemistry, electrochemistry, and coordination compounds. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 1409 Chemistry and Society
A general education course for non-science majors which satisfies four hours of the lab science requirement in the University core curriculum. This course examines the impact of chemistry on today’s world. Ideas about the atom, the nature of radioactive elements, chemical bonding, plastics, pollution, drugs, and pesticides are sample topics which will be covered from both a scientific and historical perspective. Satisfies four hours of the lab science requirements in the University core curriculum. Three hours lecture, three hours laboratory per week. Four credit hours.

CHEM 2200 Chemical Computer Laboratory
Prerequisites: CHEM 1403 and consent of department chair. Introduction to word processing, spreadsheets, graphics, and structure drawing software geared to chemical applications. Introduction to computer bulletin boards and the internet. Computer applications to chemistry portfolio preparation. Lecture one hour, laboratory three hours per week. Graded CR/NC. Two credit hours.

CHEM 2300 Theory and Problems in Chemistry
Prerequisite: CHEM 1403 or consent of instructor. Correlation of principles of chemistry and mathematics to include stoichiometry and chemical equilibrium. Recommended as an excellent review for students intending to take admissions examinations to professional schools or a refresher course for students returning to school in pursuit of a science degree. Lecture three hours per week. Three credit hours.

CHEM 2310 Analytical Chemistry I
Prerequisite: a grade of C or greater in CHEM 1403 or equivalent. Topics will include stoichiometry, acid-base equilibria, precipitation equilibria, complexation equilibria, and oxidation-reduction equilibria. Two hours lecture and one three-hour laboratory per week. Three credit hours.

CHEM 2311 Analytical Chemistry II
Prerequisite: a grade of C or greater in CHEM 2310 or equivalent. Theory and practice of some common instrumental methods of analysis. Potentiometry, UV-visible spectrophotometry, gas and liquid chromatography, and electrochemistry. Two hours lecture and one three-hour laboratory. Three credit hours.

CHEM 2450 Organic Chemistry-Short Course
Prerequisite: CHEM 1403 or 1401. A brief survey of the fundamental types of organic compounds, their nomenclature, classification, preparation, and reactions. Primarily designed for students in home economics and nursing. Lecture three hours, laboratory three hours per week. Four credit hours.

CHEM 3150 Organic Chemistry Laboratory I
Corequisites: CHEM 3350. Selected experiments in organic chemistry to emphasize techniques, properties, and synthesis of organic compounds. Chemistry BS majors should take CHEM 3250 laboratory instead of CHEM 3151 laboratory with CHEM 3351. Laboratory three hours per week. One credit hour.
CHEM 3151 Organic Chemistry Laboratory II
Corequisites: CHEM 3351. Selected experiments in organic chemistry to emphasize techniques, properties, and synthesis of organic compounds. Chemistry BS majors should take CHEM 3250 laboratory instead of CHEM 3151 laboratory with CHEM 3351. Laboratory three hours per week. One credit hour.

CHEM 3170 Physical Chemistry Laboratory I
Corequisites or prerequisites: PHYS 2122, CHEM 3370. An introduction to multivariate statistical methods and error analysis. Experiments include synthesis of compounds, measurement of physical and electrochemical properties, determination of heats of reaction and reaction rates, and superconductivity studies. Laboratory three hours per week. One credit hour.

CHEM 3171 Physical Chemistry Laboratory II
Prerequisites: CHEM 2310, 2311, 3170, 3370. Co-requisite or prerequisite: CHEM 3371. Synthesis of inorganic compounds together with measurement of quantum mechanical spectroscopic properties, magnetic susceptibility, and properties of macromolecules. Laboratory three hours. One credit hour.

CHEM 3250 Qualitative Organic Analysis Laboratory
Prerequisite: CHEM 3150. Application of wet and basic spectroscopic techniques (IR and NMR) to the qualitative identification of organic compounds. Chemistry BS majors should take this laboratory instead of CHEM 3151 laboratory with CHEM 3351. Two three-hour laboratories per week. Two credit hours.

CHEM 3330 History of Chemistry
Prerequisite: 12 hours of chemistry. A survey of the growth and development of chemistry from antiquity to the present. Lecture three hours per week. Three credit hours.

CHEM 3340 Introduction to Inorganic Chemistry
Prerequisite: CHEM 2400 or 3351 (the latter may be taken as a corequisite). A study of descriptive inorganic chemistry to include the synthesis of compounds of the representative (A-subgroup) elements and the noble gases, as well as their chemical properties and applications. Less thorough treatment of transition metal compounds. Required for BA and BS majors. Lecture three hours per week. Three credit hours.

CHEM 3350 General Organic Chemistry I
Prerequisite: CHEM 1403. A study of carbon compounds and their derivatives to include introduction to organic synthesis, reaction mechanisms, structural problems, and interpretation of spectra. Lecture three hours per week. Three credit hours.

CHEM 3351 General Organic Chemistry II
Prerequisite: CHEM 1403. A study of carbon compounds and their derivatives to include introduction to organic synthesis, reaction mechanisms, structural problems, and interpretation of spectra. Lecture three hours per week. Three credit hours.

CHEM 3370 Physical Chemistry: Thermodynamics and Kinetics
Prerequisites: CHEM 2310, 2311. Corequisites or prerequisites: MATH 2306, PHYS 2322. An introduction to theoretical chemistry to include the study of gases and condensed phases, phase changes, solutions, chemical reactions, and reaction rates. Lecture three hours per week. Three credit hours.

CHEM 3371 Physical Chemistry: Quantum and Statistical Mechanics
Prerequisites: CHEM 2310, 2311. Corequisites or prerequisites: MATH 2307, PHYS 2322. An introduction to theoretical chemistry to include the study of quantum and statistical mechanics of atomic and molecular systems. Lecture three hours per week. Three credit hours.

CHEM 3572 Physical Chemistry for the Life Sciences
Prerequisites: CHEM 2310, 2311, MATH 1302 and 1303, PHYS 1322 and 1122. An introduction to theoretical chemistry, with emphasis on the application of physical laws to biochemical systems, such as purified proteins and nucleic acids. Topics include spectroscopic techniques, thermodynamics, and kinetics. Lecture three hours, recitation one hour, and laboratory three hours per week. Five credit hours.

CHEM 4190 Chemistry Seminar
Presentation of papers, discussion, analysis, and implications of experimental investigations in the natural sciences. Seminar serves as the capstone course for assessment. Required of senior chemistry majors in their final semester before graduation. One hour per week. One credit hour.

CHEM 4251 Organic Preparation
Prerequisite: CHEM 3151 or 3250. Advanced experiments in organic chemistry employing special apparatus and techniques. Dual-listed in the UALR Graduate Catalog as CHEM 5251. Two three-hour laboratories per week. Two credit hours.

CHEM 4340 Inorganic Chemistry
Prerequisites: CHEM 3340, 3371 (the latter may be taken as a corequisite). A theoretical treatment of inorganic chemistry to include atomic structure, valence bond, molecular orbital and ligand field theories; the crystalline state; thermodynamic and kinetic aspects of transition metal chemistry. Laboratory will reinforce concepts developed in lecture. Required for the BS major. Dual-listed in the UALR Graduate Catalog as CHEM 5340. Lecture two hours and laboratory three hours per week. Three credit hours.

CHEM 4350 Intermediate Organic Chemistry
Prerequisite: CHEM 3351. An elective course designed for students with special interests in organic chemistry who wish exposure to additional concepts beyond those covered in CHEM 3350, 3351. Dual-listed in the UALR Graduate Catalog as CHEM 5350. Lecture three hours per week. Three credit hours.

CHEM 4380 Introduction to Polymer Chemistry
Prerequisite: CHEM 3351, 3351 or 3250. Other courses recommended but not required are CHEM 3370, 3371, 3171, and 3572. Theoretical and practical aspects of polymer chemistry will be coordinated. Topics include history, types of polymerizations, kinetics, molecular weight, physical properties including thermal and spectroscopic characterization, biopolymers and engineering resins. Dual-listed in the UALR Graduate Catalog as CHEM 5380. Lecture two hours, laboratory three hours. Three credit hours.

CHEM 4399 Special Topics in Chemistry
Prerequisite: consent of instructor. A course for students interested in acquiring additional knowledge in selected topics in chemistry. Possible subjects include: chemical carcinogenesis, environmental chemistry, solid state chemistry, radiochemistry, macromolecules, surface chemistry, quantum chemistry, or others. Dual-listed in the UALR Graduate Catalog as CHEM 5399. Lecture three hours per week. Three credit hours.

CHEM 4400, 4200, 4300, 4400 Independent Study
Prerequisites: junior or senior standing, consent of the chairperson. Designed for students who want to carry out special investigations, which could include chemical education research or directed study of a specialized chemical topic of interest to the student. Topic and method of procedure must have approval of the supervising faculty member. The student is expected to spend four to six hours per week on the project 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. One, two, three, or four credit hours.

CHEM 4411 Instrumental Analysis
Prerequisites: CHEM 2310, 2311, 3350; PHYS 2322, 2122 or 1322, 1122 with consent of instructor. A study of the most common modern instrumental methods of analysis, to include topics in spectroscopy, electrochemistry, and chromatography. Dual-listed in the UALR Graduate Catalog as CHEM 5411. Lecture three hours, one four-hour laboratory per week. Four credit hours.

CHEM 4420 Biochemistry
Prerequisites: CHEM 2310, 2311, 3151, 3351. A basic course covering the chemistry and metabolism of proteins, lipids, carbohydrates, and nucleic acids, and the action of vitamins, hormones, and enzymes. Dual-listed in the UALR Graduate Catalog as CHEM 5420. Lecture three hours, laboratory three hours. Four credit hours.

CHEM 4289, 4389, 4489 Undergraduate Research
Prerequisites: consent of department chairperson, junior or senior standing, compliance with approved guidelines (available from chairperson) and comments in the printed schedule. Trains the student to analyze, plan, and conduct experimental work on a chemical problem. Frequent conferences and a study of chemical literature with a final written report are required. The student is expected to spend four to six hours per week on the project 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. Two, three, or four credit hours.
CLNG 1301 Elementary Classical Language I
Offered in a designated classical language in response to student interest. Introduction to the grammar of a designated classical language. Elementary reading and translation in selected texts. Three credit hours.

CLNG 1302 Elementary Classical Language II
Prerequisite: CLNG 1301 in specified classical language or equivalent. Continuation of Classical Language 1301. Three credit hours.

CLNG 1311 Elementary Biblical Hebrew
Introduction to the grammar of biblical Hebrew. Elementary reading in selected biblical texts. Three credit hours.

CLNG 1312 Biblical Hebrew Reading
Prerequisite: CLNG 1311 or consent of instructor. Reading of selected biblical prose texts, leading toward development of rapid reading ability. Three credit hours.

CLNG 2301 Intermediate Classical Language I
Prerequisite: CLNG 1302 or equivalent. Readings from the works of classical authors providing an introduction to the literature of the ancient world. Three credit hours.

CLNG 2302 Intermediate Classical Language II
Prerequisite: CLNG 2301 or equivalent. Readings from the works of classical authors to prepare students for studies of prose and poetry written during the flowering of ancient civilizations. Three credit hours.

CLNG 3311 Advanced Biblical Hebrew
Prerequisite: CLNG 1312. Selected readings of poetic texts in the Hebrew Bible. Investigation of poetic syntax and meter. Three credit hours.

Computer Science (CPSC)

CPSC 1175 Introduction to Computer Science Laboratory
Prerequisite: MATH 1302 or equivalent. Corequisite: CPSC 1375. A laboratory course to accompany CPSC 1375. Introduction to editing, compiling, and executing programs on various platforms; UNIX operating system; number systems and number conversions; presentation software, and internet resources. Successful completion of this course requires a grade of C or greater. Two hours laboratory per week. One credit hour.

CPSC 1310 Internet Technologies
See IFSC 1310. Internet Technologies.

CPSC 1370 Computer Literacy
The fundamental concepts of computing in a personal computer environment. Introduction to hardware and software and their interactions. The focus is on practical problem solving using popular PC application software for word processing, spreadsheets, and databases. This course may not be counted for credit toward a computer science major or minor. Three hours lecture per week. Three credit hours.

CPSC 1372 RPG Programming
Prerequisite: CPSC 1375, MGMT 1310, or equivalent. Report Program Generator is a nonprocedural language for data processing. Input, output, arithmetic, comparison, control breaks, arrays, sequential files, direct-access files. This course may not be counted for credit toward a computer science major or minor. Three hours lecture per week. Three credit hours.

CPSC 1375 Programming I
Prerequisite: MATH 1302 or equivalent. Corequisite: CPSC 1175. Introduction to algorithm development and implementation using control structures, functions, arrays, pointers, and basic object-oriented concepts. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2376 Programming II
Prerequisite: CPSC 2375. Advanced programming concepts including structures, abstract data types, details of object-oriented concepts including encapsulation and polymorphism in current object-oriented language. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2377 Introduction to Game Programming
Prerequisites: CPSC 1375, IFSC 2300‐SYEN 1302. Advanced programming concepts including structures, abstract data types, recursive techniques, game based hands-on experiences for students to learn and understand details of advanced object-oriented concepts in a current object-oriented language. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2380 Data Structures and Algorithms
Prerequisite: CPSC 2376 or 2377. A systematic study of the main data structures of computer science: arrays, stacks, queues, linked lists, trees, graphs, hash tables. Implementation and analysis of the algorithms and programming techniques for searching sorting, inserting into, and deleting form these structures; efficiency considerations. Successful completion of this course requires a grade of C or greater. Three hours lecture per week. Three credit hours.

CPSC 2382 Introduction to Computer Systems and Assembly Language
Prerequisite: CPSC 1375 or equivalent. Introduction to machine architecture, detailed study of the PC instruction set and addressing modes. Assembling, linking, executing, and debugging of assembly language programs. Additional topics include keyboard and screen handling, string processing, interrupts, binary and decimal arithmetic. Three hours lecture per week. Three credit hours.

CPSC 2391 Cooperative Education
Prerequisites: major in computer science, CPSC 2376 or 2377, and consent of department chairperson. Designed to complement and extend the classroom learning experience through the application of theoretical concepts in a professional work environment. A minimum of 200 hours of work with a participating employer. The exact number of work hours, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the Office of Cooperative Education. Three credit hours.

CPSC 2399 Special Topics
Prerequisite: CPSC 1370, 1375, or equivalent or the consent of the instructor. Introduction to a programming language to be selected from the following list: Visual BASIC, C, ADA, Perl, XML, scripting languages, internet programming. This course may be repeated with a different language. This course is not accepted for credit in the computer science major or minor. Three hours lecture per week. Three credit hours.

CPSC 3366 Interactive Computer Graphics and Animation
Prerequisites: MATH 2310 and MATH 3312. Introduces the student to basic graphics architecture, coordinate systems, three‐dimensional representations and transformations, simple visible‐surface algorithms, introduction to illumination, Gouraud and Phong shading, antialiasing, texture mapping, and animation techniques. Three hours lecture per week. Three credit hours.

CPSC 3370 Net-centric Computing: Systems Concepts
Prerequisites: CPSC 2380 and CPSC 2382. Coverage of systems programming of net-centric computing systems. Hands-on experiences for students to learn how net-centric computing systems work and writing net-centric computing applications. Three hours lecture per week. Three credit hours.
CPSC 3371 Net-centric Computing: Language Concepts
Prerequisites: CPSC 2380 and CPSC 2382. Coverage of language design issues for net-centric computing systems. Hands-on experiences for students to learn and understand trade-offs between functional and applicative needs compared to language design and implementation issues. Three hours lecture per week. Three credit hours.

CPSC 3372 System Utilities
Prerequisite: CPSC 2376 or 2377. Job steps, file identification, program storage, data storage, cataloged procedures, libraries, utility programs. Three hours lecture. Three credit hours.

CPSC 3375 Database Concepts I
Prerequisites: CPSC 2380, MATH 2310. In-depth study of data models including E-R, ER, Relational, object relational, and other current models; Data language including relational algebra, relational calculus, SQL, and QBE; Database design including functional dependency and normalization; Database implementation using popular DBMSs; Application development using embedded SQL enhanced by web technology. Three hours lecture per week. Three credit hours.

CPSC 3380 Operating Systems
Prerequisites: CPSC 3370; MATH 1452 or equivalent. Buffering, physical input/output, and data management. Loaders, linkage editors, and relocation. Multiprogramming, scheduling resource allocation, and virtual memory. Three hours lecture per week. Three credit hours.

CPSC 3381 Enterprise COBOL Application Development
Prerequisites: CPSC 2357, 2357', or consent of the instructor. Accelerated programming in COBOL. Includes organization of COBOL programs, input, output, control cards, and compiler/interpreter-related issues. Three hours lecture per week. Three credit hours.

CPSC 3383 Language Structure
Prerequisites: CPSC 2380, MATH 2310. Concepts of syntax and semantics of grammars and languages. Study and comparison of the organization and major constructs of various programming language paradigms, with in-depth study of several specific languages. Implementation and compiler/interpreter-related issues. Three hours lecture. Three credit hours.

CPSC 3384 Structured and Multimedia
Prerequisites: CPSC 2380 and MATH 1452 or equivalent. In-depth study of sequential, indexed, and direct file structure; buffering, indexing; file systems; markup file structures including XML. Modern file representation including image files and sound files; Multimedia technology including CD-ROM, DVDs, and tape storage. Three hours lecture per week. Three credit hours.

CPSC 3386 Information Storage and Retrieval
Prerequisites: CPSC 2380, MATH 2310, 1452 or equivalent. The analysis of information content by statistical, syntactic, and logical methods. Search and matching techniques. Automatic retrieval systems, question answering systems. Evaluation of retrieval effectiveness. Three hours lecture per week. Three credit hours.

CPSC 3387 Simulation Methods
Prerequisites: CPSC 2380, STAT 3352 or equivalent, MATH 1452. Introduction to the design and analysis of discrete probabilistic systems using simulation. Basic concepts of simulation and design for both continuous and discrete systems are covered. Combined simulation methods, including integrated qualitative/quantitative system modeling. Emphasizes model construction and simulation language. Three hours lecture per week. Three credit hours.

CPSC 3391 Cooperative Education
Prerequisites: major in computer science, completion of the computer science freshman and sophomore core, and consent of department chairperson. Further work experiences complement and extend the classroom learning experience through the application of theoretical concepts in a professional work environment. Minimum of 200 hours work with a participating employer. The exact number of work hours, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the Office of Cooperative Education. Three credit hours.

CPSC 3402 Computer Organization I

CPSC 4210 Computer Ethics
See IFSC 4210. Computer Ethics

CPSC 4370 Theory of Computation
Prerequisites: CPSC 3371, MATH 2310. A study of the main areas of theoretical computer science and their hierarchical interconnections. Basic results relating to formal models of computation, with emphasis on grammars and languages, finite automata, Turning machines, and computational complexity. Three hours lecture per week. Three credit hours.

CPSC 4371 Computer Documentation
Prerequisite: Senior standing in computer science and consent of instructor. The design and development of computer system documentation with emphasis on user documentation. Practical experience in writing a user manual using structured design methodology. Discussion of online documentation, hyper-text, and emerging documentation technologies. Three hours lecture per week. Three credit hours.

CPSC 4372 Object-oriented Programming
Prerequisites: working knowledge of a procedural programming language and UNIX operating system, or consent of the instructor. Concepts of object-oriented analysis, design, and implementation. Object-oriented programming in C++, Smalltalk, Java, and/or another current object-oriented programming language. Dual-listed in the UALR Graduate Catalog as CPSC 5372. Three hours lecture. Three credit hours.

CPSC 4373 Software Engineering
Prerequisites: CPSC 3370, CPSC 3375, and MATH 1452. Analysis of system requirements, software systems design techniques, software processes, software life-cycle models, software economics, user interfaces, software testing and software maintenance. Students gain experience in the team approach to medium/large system development. Three hours lecture per week. Three credit hours.

CPSC 4375 Database Concepts II
Prerequisites: CPSC 3370, equivalent. Advanced in-depth study of indexing, security, query processing, transactions; introduction to data warehousing; parallel and distributed databases. Three hours lecture per week. Three credit hours.

CPSC 4376 Applied Cryptography
Prerequisites: CPSC 2380, MATH 2310, and STAT 3352 or equivalents. A survey and study of the major cryptographic techniques, algorithms, and implementations, with emphasis on applications to communications and network security. Intended as a practical introduction to the current state-of-the-art of cryptographic usage. Dual-listed in the UALR Graduate Catalog as CPSC 5376. Three hours lecture. Three credit hours.

CPSC 4381 Computer Organization II
Prerequisite: CPSC 3482. Computer system design problems, such as arithmetic and non-arithmetic processing, memory uses, storage management, addressing, control, and I/O. Comparison of specific machines and their organizations. Three hours lecture per week. Three credit hours.

CPSC 4382 Compiler Construction and Theory
Prerequisites: CPSC 3371. Review of program language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Compile and run-time symbol tables, lexical scan, syntax scan, object code generation, error diagnostics, and optimization techniques. Introduction to precedence, context-free, and finite state grammars. Three hours lecture. Three credit hours.

CPSC 4383 Artificial Intelligence
Prerequisites: CPSC 3371, MATH 1452 and MATH 2310. 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, user uncertainty, etc. Three hours lecture per week. Three credit hours.

CPSC 4384 Computer Networks
Prerequisites: CPSC 3370 and CPSC 3482. Network systems including transmission media, packet transmission, circuit / packet switching technology, LAN technology and network topology, TCP/IP, internetworking, and network applications. Three hours lecture per week. Three credit hours.

CPSC 4387 Distributed Computing
Prerequisites: CPSC 3370. Network-based client/server computing. Topics include TCP/IP, object-oriented technology, distributed objects and their interfaces, JDBC, remote method invocation, CORBA, and web-based software system architecture.

CPSC 4388 Smart Software Systems
Prerequisite: CPSC 3373, MATH 1452. Study of the concept, design, and implementation of rule-based systems, agent-based systems, reasoning, reasoning under uncertainty; belief systems, explanation systems; knowledge representation, knowledge acquisition, and knowledge discovery; and application of knowledge engineering in web technology. Three hours lecture per week. Three credit hours.

CPSC 4389 E-commerce: Analysis, Design, and Implementation
Prerequisites: CPSC 3371, 3375. E-commerce site analysis and design. Web-based system architecture, client/server computing, network protocols, software engineering for web based systems, computer networks, web-based databases, script languages (Java, VB), XML, ASP, SQL, and DNS.

CPSC 4391 Cooperative Education
Prerequisites: major in computer science, CPSC 3391, and consent of department chairperson. Continuation of CPSC 3391. Work experiences to complement and extend the classroom learning experience through the application of theoretical concepts in a professional work environment. A minimum of 200 hours work with a participating employer. The exact number of work hours, activities, and responsibilities are dependent on the nature of the work experience and must be specified in written agreements coordinated with the Office of Cooperative Education. Three credit hours.
CPSC 4392 Capstone Project
Prerequisites: CPSC 3370 and CPSC 3371. Capstone course in which students individually design software system, document and present their conclusions. Students also develop a detailed undergraduate portfolio for a comprehensive review of their undergraduate work. Project work involves the development of design alternatives, development of an appropriate software architecture, and design and test the implemented system. The software design focuses on addressing overall design goals while understanding constraints of cost, etc. Deliverables and schedule are determined by the instructor. Three credit hours.

CPSC 4399 Special Topics
Prerequisite: consent of instructor. Advanced topics in areas of current interest in computer science. Refer to the semester schedule for specific topics offered. Dual-listed in the UALR Graduate Catalog as CPSC 5399. Three hours lecture. Three credit hours.

CPSC 4100, 4200, 4300, 4400, 4500 Independent Study
Prerequisites: senior standing, at least 20 hours in computer science, consent of instructor. Designed for students who want to carry out special investigations. Topic and method of procedure must have approval of the supervising faculty member. Dual-listed in the UALR Graduate Catalog at the 5000-level. Sixty hours work per credit hour. One, two, three, four, or five credit hours.

CPSC 4395, 4495, 4595 Internship
Prerequisites: senior standing in computer science, approval of assignment by advisor. Professional experience related to student’s discipline under supervision of advisor. Sixty hours work per credit hour. Three, four, or five credit hours.

Construction Management (CNMG)

CNMG 1301 The Construction Industry
Introduction to the construction industry and the career opportunities available within residential, building, heavy civil, and industrial construction. The different roles of the various participants are examined along with industry history and traditions. Proper dress and safety requirements for office and field site visits discussed. Includes guest speakers, field trips, and project site visits. Two hour lecture, two hours lab. Three credit hours.

CNMG 1305 Drawings and Specifications
Prerequisites: ETME 1300 or consent of instructor. Introduction to basic construction drawings and specification interpretation with emphasis on construction drawings and blueprint reading, CSI specifications and master format, project manual, shop drawings, as-built drawings, and proper construction terminology. Two hours lecture, two hours lab. Three credit hours.

CNMG 2195 Service Learning
Prerequisites: CNMG 2316 or consent of the instructor. A construction-related labor experience in assigned community service projects. Faculty provide site safety instruction, proper tool usage, construction methods, and, arrange for specialty contractors to conduct hands-on training when necessary. A minimum of 40 hours of documented work is required. Two hours lab. One credit hour.

CNMG 2310 Materials and Methods I
Prerequisites: CNMG 1305, MATH 1302, MGMT 1310, and RHET 1311, or consent of instructor. Introduction to specifications, standards, codes, quality control, and quantity survey as they pertain to the execution of selected construction materials and methods. Topics include site work, concrete, masonry, and structural steel. Laboratories include field trips, print-reading, quantity survey, material usage, and applied construction methods. Two hours lecture, two hours lab. Three credit hours.

CNMG 2312 Materials and Methods II
Prerequisites: CNMG 1305, MATH 1302, MGMT 1310, and RHET 1311, or consent of instructor. Introduction to specifications, standards, codes, quality control, and quantity survey as they pertain to the execution of selected construction materials and methods. Topics include rough and finish carpentry, thermal and moisture protection, doors and windows, finishes, and specialties. Laboratories include field trips, print-reading, quantity survey, material usage, and applied construction methods. Two hours lecture, two hours lab. Three credit hours.

CNMG 2314 Service Systems of Buildings
Prerequisites: CNMG 1305, MATH 1302, MGMT 1310, and RHET 1311, or consent of instructor. Introduction to services systems within a modern structure. Includes HVAC, plumbing, fire protection, electrical and conveying systems. Two hours lecture and two hours lab. Three credit hours.

CNMG 2316 Construction Surveying
Prerequisites: CNMG 2310 and MATH 1303, or consent of instructor. Introduction to the principles of construction surveying, project layout, and field performance and surveying equipment management. Topics will include use and care of surveying instruments, directions, angles, surveying calculations, errors, and computations of areas and volumes. Two hours lecture, three hours lab. Three credit hours.

CNMG 2323 Construction Administration
Prerequisites: CNMG 2312, 2314, 2316, and SPCH 1300, or consent of instructor. 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. Three hours lecture. Three credit hours.

CNMG 3147 Soil Mechanics Lab
Prerequisites or corequisites: CNMG 3347 or consent of the instructor. Laboratory testing of rocks and soils, identification and index property tests, permeability tests, moisture density expansion relationships, unconfined and triaxial compression tests, and consolidation and expansion of soils. One three-hour lab. One credit hour.

CNMG 3195 Community Service Projects
Prerequisites: CNMG 2315, 2195, and consent of instructor. Under the guidance of faculty members, students provide labor and site supervision for an assigned community service project. A minimum of 40 hours of documented labor and supervision is required. Two hours lab. One credit hour.

CNMG 3312 Field Engineering
Prerequisites: CNMG 2316 or consent of instructor. Application of surveying to the construction site. Layout and control of buildings, road, bridges, utilities, and other types of projects studied. One hour lecture, four hours lab. Three credit hours.

CNMG 3322 Concrete Construction
Prerequisites: CNMG 3333 or consent of instructor. Provides an in-depth examination of the principles and applications of concrete construction. Study of process of placing ready mix concrete from batching to curing along with the design, analysis, and economics of formwork. Reinforcing steel, the ACI field technician applications, and the ACI Flatwork Technician Certification are also covered. Two hours lecture, two hours lab. Three credit hours.
CNMG 3327 Field Operations
Prerequisites: CNMG 3333 or consent of instructor. Introduction to the principles of construction project field supervision and equipment management. Supervision topics include leadership, motivation, communications, problem solving, decision making, production control, quality control, and computerized reporting. Equipment management topics include time value of money, equipment depreciation, earth moving fundamentals, ownership and operating cost, and equipment selection and usage. Two hours lecture, two hours lab. Three credit hours.

CNMG 3333 Statics and Strength of Materials
Prerequisites: CNMG 2323, MATH 1342, and PHYS 1321/1121, or consent of instructor. An analytical and practical approach to the principles and physical concepts of statics and strength of materials related to construction. Two hours lecture, two hours lab. Three credit hours.

CNMG 3339 Bid Process
Prerequisites: CNMG 2316 and CNMG 2323 or consent of the instructor. Theory and practice of construction project bidding and estimating. Topics include proposal solicitation and preparation, bidding strategy, estimate types and content, quantity survey, ethics, and an introduction to computer use in estimating. Three hours lecture. Three credit hours.

CNMG 3342 Construction Safety
Prerequisites: CNMG 3333 or the consent of instructor. 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. Three hours lecture. Three credit hours.

CNMG 3347 Soils and Foundations
Prerequisites: CNMG 3333, or consent of instructor. Introduction to structural foundation types and design, use of soil mechanics technology, techniques for moisture control and drainage, construction considerations, subsurface exploration, retaining structures, sheet pile walls, pile and drilled pier foundations, reinforced earth, and soil reinforcement. Two hours lecture, two hours lab. Three credit hours.

CNMG 4195 Professional Service Development
Prerequisites: CNMG 3195 and 4311 or consent of instructor. Students acts as a construction or project manager and control a community service project through the planning, design, bidding, construction, and close-out phases. A minimum of 40 hours of documented construction or project management is required. Two hours lab. One credit hour.

CNMG 4100, 4200, 4300 Independent Study
Prerequisite: declared major in construction management with 60 hours completed toward degree. Topic and method of procedure must have approval of the supervising faculty member. 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 is agreed on in advance by the student and the instructor. With approval, may be repeated for up to six hours of credit toward the construction management major. One, two, or three credit hours.

CNMG 4311 Estimating
Prerequisites: CNMG 3333 and MGMT 3352, or consent of instructor. Requisite: CNMG 3322 or consent of instructor. Advanced applications and concepts of construction project estimating. Topics include computer aided 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. Two hours lecture, two hours lab. Three credit hours.

CNMG 4321 Reinforced Concrete Design
Prerequisite: CNMG 3333 or consent of instructor. Behavior and design of reinforced concrete elements by ultimate strength design; fundamentals of prestressed concrete. Three hours lecture. Three credit hours.

CNMG 4322 Building Structure Design
Prerequisites: CNMG 4311 or consent of instructor. Introduction to building structure design for construction management students. Study of service and live loads for structural steel, wood, reinforced concrete, and masonry building materials are investigated through computation and project work. Two hours lecture and two hours lab. Three credit hours.

CNMG 4329 Construction Planning and Scheduling
Prerequisite: CNMG 4311 or consent of instructor. 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. Two hours lecture and two hours lab. Three credit hours.

CNMG 4334 Construction Contracts and Law
Prerequisites: CNMG 4311 and MKTG 2380, or consent of instructor. A study of construction contracts in relation to project delivery systems and the basic principles of construction law. Case studies are used to analyze selected areas that affect the construction process. Topics include standard agreements and conditions, negligence, risk, indemnities, modifications, mechanics’ lien, claims, dispute resolution, conflicts of interest, ethical consideration, and labor law. Three hours lecture. Three credit hours.

CNMG 4345 Construction Management
Prerequisites: CNMG 3342 4329, 4334, SPCH 3320, and consent of instructor. A capstone course. Students develop and organize construction companies. Project contracts are awarded and contract administration is required. One hour lecture, four hours lab. Three credit hours.

CNMG 4370 Structural Steel Design
Prerequisite: CNMG 3333 or consent of the instructor. Methods of analysis and design of structural steel buildings, including tension members, columns, and bending members. Design of plate girders, composite design, and connections. Uses the ABC Manual of Steel Construction and the specification for the Design, Fabrication and Erection of Structural Steel for Buildings, latest edition. Three hours lecture. Three credit hours.

CNMG 4391 Cooperative Education
Prerequisites: declared major in construction management with 75 hours completed toward degree; cumulative GPA of 2.50; approval of assignment by construction management director. Requires at least 400 contact hours on the job. Three credit hours.

CNMG 4395 Professional Development
Prerequisites: senior standing in construction management and consent of instructor. Partnerships between students and nonprofit community organizations will be established. Students use skills in construction management to assist with construction-related projects. A minimum of 120 hours of work is required along with progress reports and presentations. Three credit hours.

CNMG 4199, 4299, 4399 Special Topics in Construction
Prerequisites: consent of instructor based on relevance of subject matter to student career goals. Designed to meet special needs of students or industry to cover application of construction management to specific problems. Meets equivalent of one hour per week for each credit hour value. May be taken more than once for credit. One, two, or three credit hours.
CRJU 2300 Introduction to Criminal Justice
Basic understanding of legal and ethical foundations of criminal justice and the major components of the criminal justice system. Three credit hours.

CRJU 2301 Police and Community Crime Prevention
The role of the police in community crime prevention efforts; citizen organization and participation; the police as the crucial linkage; examination of existing programs, problems, and potential; analysis of success and failure in joint community crime prevention efforts. Three credit hours.

CRJU 3301 Criminal Evidence
Prerequisite: CRJU 2300. An analysis of the legal problems associated with the investigation of crime; the acquisition, preservation, presentation of evidence; principles of proof in criminal proceedings. Three credit hours.

CRJU 3302 Legal Aspects of Law Enforcement
Prerequisite: CRJU 2300. A study of the leading constitutional cases in the area of criminal justice with particular emphasis on cases dealing with search and seizure, the privilege against self-incrimination, assistance of counsel, and fair trial matters. Three credit hours.

CRJU 3303 Survey of Corrections
Explores the operation of the correctional system within the context of society and within the criminal justice system, the integration of criminology, the courts and corrections; the relationship the correctional system has to society, its interaction with the other components within the criminal justice system, and its historical foundations. Three credit hours.

CRJU 3304 Police and Society
This course will examine the relationship between the police and the community from several different perspectives. We will start with an introduction to the history, practices and issues related to the law enforcement function in our society, followed by an overview of police functions and responsibilities at the local, state, and federal levels. Police operations will be examined relative to effectiveness in crime control, delivery of services, and maintenance of order. We will review contemporary policy issues, programs and strategies. Finally, we will examine existing programs, problems, and potential directions as well as successes and failures in policing. Primary emphasis will be placed on community policing and its impact on policing in the 21st century. Three credit hours.

CRJU 3105, 3205, 3305 Seminar in Criminal Justice
Prerequisite: CRJU 2300. A study of special problems, issues, or trends relating to the criminal justice system. May be repeated with a change of subject and with permission of the department chairperson. One, two, or three credit hours.

CRJU 3306 Police Administration and Management
Basic understanding of the part police play within society and within the criminal justice system. Explores the relationship the police have to society, their interaction with the other components within the criminal justice system, and their historical foundations. Discusses management strategies that have been employed over the past century in policing emphasizing the daily administration of a police agency. Three credit hours.

CRJU 3307 Criminal Law
Prerequisite: CRJU 2300. An analysis of criminal acts, elements of specific crimes, and defenses permitted in the United States legal system. Three credit hours.

CRJU 3309 Cybercrime
Prerequisite: IFAS 2300 or consent of instructor. Designed to acquaint students with legal enforcement agency response to crimes committed using computers, networks, and the internet. Three credit hours.

CRJU 3310 Race/Ethnicity and Criminal Justice
Prerequisite: CRJU 2300. An exploration of the differing experiences of racial/ethnic groups as they come into contact with crime and the criminal justice system. Three credit hours.

CRJU 3311 Gangs
Prerequisite: CRJU 2300. An examination of the historical, cross-cultural, and current state of gang involvement. Three credit hours.

CRJU 3312 Victimology
Prerequisite: CRJU 2300. A review of the distribution and causes of crime from the point of view of the victim, as well as detailing the interface between victims and the legal and social service communities. Three credit hours.

CRJU 3313 Crime and Science: An Introduction to Forensic Science
A general overview of the field of forensic science, the application of “science,” and the scientific method to the law. Topics such as criminalistics, including firearms and toolmarks, trace evidence, fingerprints, toxicology, and biological evidence, such as serology and DNA. Forensic pathology, forensic odontology, forensic anthropology, and forensic psychology will be introduced. An experience oriented component will be provided by currently active forensic specialists. Three credit hours.

CRJU 3337 Juvenile Delinquency
See SOCI 3337.

CRJU 3348 Internship I
Prerequisite: consent of instructor. Experience in law enforcement agencies, juvenile courts, probation and parole departments, other correctional institutions, delinquency control programs, and public or voluntary agencies. Three credit hours.

CRJU 3349 Internship II
A continuation of CRJU 3348. Three credit hours.

CRJU 3396 Psychology and the Criminal Process
An exploration of the contributions of psychology to the practice of law, law enforcement, and other related areas, illustrated in terms of testimony and court procedures, psychopathology, correctional services, the development of laws, and social psychology. Three credit hours.

CRJU 4199, 4299 Criminal Justice Workshop
Subjects vary. Sixteen hours of workshop time will equal one credit hour. One or two credit hours.

CRJU 4300 Crime and Behavior
 Enables students to identify and understand the major schools of thought in criminology and to integrate them into a comprehensive application to the real world. Three credit hours.

CRJU 4301 Judicial System and Process
Prerequisites: CRJU 2300. A survey of state, local, and federal judicial systems and their interrelationships. Examines judicial structures, functions, and decision-making procedures. Dual-listed in the UALR Graduate Catalog as CRJU 5301. Three credit hours.

CRJU 4302 Law and Society
Prerequisite: CRJU 2300. An examination of the origins and history of law in society, including the evolving roles of judges, juries, defense attorneys, and prosecutors. Examines the evolution of civil and criminal law, the adversary system, and the concept of justice. Dual-listed in the UALR Graduate Catalog as CRJU 5302. Three credit hours.

CRJU 4303 Readings in Criminal Justice
Prerequisite: CRJU 2300. A survey of the current literature on crime and law enforcement, with emphasis on special research reports and periodical and journal articles in criminal justice, law sociology, and related fields. Three credit hours.

CRJU 4304 Research Methods
Instruction in reading and comprehension of reports and research within the criminal justice field, identify the application of various research techniques and statistical methods, and produce a draft research proposal. Three credit hours.

CRJU 4305 Juvenile Law and Process
Prerequisite: CRJU 2300. An exploration of the philosophical basis, process, legal rights of juveniles, and roles of the major participants in the juvenile justice system. Three credit hours.

CRJU 4307 Drug Abuse
A study of frequently abused drugs, with emphasis on the personal, social, and legal consequences of drug abuse and on the treatment of drug addiction. Three credit hours.

CRJU 4320 Independent Study
Prerequisites: 15 hours of CRJU courses, senior standing with 3.00 GPA, consent of instructor. Advanced study and research. One, two, or three credit hours.

CRJU 4332 Corrections Psychology
Prerequisite: CRJU 2300. A review of theoretical and applied issues in the practice of correctional psychology. Focus on relevant empirical studies and their application in a correctional context. Three credit hours.

CRJU 4333 Cooperative Education
Prerequisite: consent of instructor. Experience in law enforcement agencies, juvenile courts, probation and parole departments, other correctional institutions, delinquency control programs, and public or voluntary agencies. Three credit hours.

CRJU 4351 Constitutional Law II
See POLS 4351.

CRJU 4380 Comparative Criminal Justice Systems
Prerequisites: CRJU 2300. An analysis of the law enforcement, judicial, and correctional systems of other nations, with emphasis on comparison with the United States system of criminal justice. Dual-listed in the UALR Graduate Catalog as CRJU 5380. Three credit hours.
Dance (DANC)

DANC 1179 Effort Shape
Exploration of various factors of dance in performance, including exertion, tension, weight, time, and space, contributing to patterns of movement. One credit hour.

DANC 1210 Improvisation
The course gives students an opportunity to discover movement creatively. Two credit hours.

DANC 1211, 1212 Ballet I and II
Elementary classical ballet stressing placement, terminology, basic barre, adagio, allegro with combinations. DANC 1212 is a continuation of DANC 1211. Two credit hours.

DANC 1221, 1222 Modern I and II
Basic course exploring beginner levels of modern dance, with basic dance movement in terms of body placement, direction, rhythm, dynamics, space, and motivation. DANC 1222 is a continuation of DANC 1221. Two credit hours.

DANC 1231, 1232 Jazz I and II
Beginner jazz course. Explores placement, rhythm, lyrical, and percussive style. A continuation of DANC 1231. Two credit hours.

DANC 1241, 1242 Tap I and II
Exploration of tap and musical comedy dance forms. DANC 1242 is a continuation of DANC 1241. Two credit hours.

DANC 1251, 1252 Theatre Dance I and II
Individual and group work in improving posture, movement, and physical expressiveness for actors, singers, dancers, and musicians working in production. DANC 1252 is a continuation of DANC 1251. Two credit hours.

DANC 1254 Dance I for Majors
Theory and practice needed to understand and develop an adequate level of skill; methods and techniques of teaching folk, square, and social dance. Two hours lecture, three hours laboratory. Two credit hours.

DANC 2173 Dance Ensemble I
Participation in audition, rehearsal, and performance of dance in musical comedy, opera, gallery, environment, lecture/demonstrations, and concerts. One credit hour.

DANC 2174 Dance Ensemble II
Participation in audition, rehearsal, and performance of dance in musical comedy, opera, gallery, environment, lecture/demonstrations, and concerts. One credit hour.

DANC 2175 Partnering I
Prerequisites: DANC 1211, 1221, 1231. Basic principles for partnering in ballet, modern, and jazz. One credit hour.

DANC 2177 Dance Repertory I
Prerequisites: DANC 1212, 1222, 1232. Study of works of ballet, modern, jazz. One credit hour.

DANC 2211, 2212 Ballet III and IV
Prerequisite: DANC 1212. Intermediate classical ballet stressing placement, terminology, barre, adagio, allegro with turns and combinations. Beginner partnering and pointe work by audition. Performance stressed. DANC 2212 is the second part of DANC 2211. Two credit hours.

DANC 2221 Modern III
Prerequisite: DANC 1222. Continued study of modern dance techniques involving variations using rhythm, dynamics, balance, falls, recovery, spirals. Two credit hours.

DANC 2222 Modern IV
Prerequisite: DANC 2221. Exploration of elements of movement, space, time, focus, path, planes, and pulse. Two credit hours.

DANC 2231 Jazz III
Prerequisite: DANC 1232. Intermediate jazz technique stressing variations, turns, and combination work. Two credit hours.

DANC 2232 Jazz IV
Prerequisite: DANC 2231. Continuation of intermediate jazz techniques. Two credit hours.

DANC 2251 Theatre Dance III
Prerequisite: DANC 1252 or 2231. Movement for actors, singers, dancers, and musicians working toward production. Continuation of DANC 1251 and 1252. Two credit hours.

DANC 2252 Theatre Dance IV
Prerequisite: DANC 2251 or 2231. Movement for actors, singers, dancers, and musicians working toward production. Continuation of DANC 2251. Two credit hours.

DANC 2270 Dance Production
An introduction to the technical skills required for a quality dance production; coordination of music, sound, and lights; creating costumes and makeup; the basic techniques of management and publicity. Two credit hours.

DANC 3211 Ballet V
Prerequisite: DANC 2212. Advanced classical ballet stressing beats, jumps, turns, pointe work, partnering, repertory, and performance. Two credit hours.

DANC 3212 Ballet VI
Prerequisite: DANC 3211. Second part of advanced classical ballet, stressing beats, jumps, turns, pointe work, partnering, repertory, and performance. Two credit hours.

DANC 3221 Modern V
Prerequisite: DANC 2222. Intermediate modern dance with emphasis on various styles and repertory works aimed toward performance. Two credit hours.

DANC 3222 Modern VI
Prerequisite: DANC 3221. Continued emphasis on various styles, combinations, and repertory works for performance. Two credit hours.

DANC 3271 Choreography I
Prerequisites: DANC 3212, 3211, or previous dance experience. Introduction to basic elements of composition. Focus on the fundamental elements which give form to dance. Two credit hours.

DANC 3272 Choreography II
Prerequisites: DANC 3211. Exploration of time-space factors in movement. Focus on dynamics, rhythm, design, gesture, and motivation as the elements that give form to dance. Two credit hours.

DANC 3311 History and Philosophy of Dance
A survey of dance styles from lineage-based societies through contemporary dance. Three credit hours.

DANC 3320 Labanotation
System for recording movement. An aid in clarifying understanding of movement both as performer and as choreographer. Three credit hours.

DANC 4191, 4192, 4193 Dance Performance
Must be taken in sequence. Study of selection of works, areas of appropriate staging, musical selections, technical aspects, audition, rehearsal, and all aspects of performance of dance. One credit hour.

DANC 4211 Ballet VII
Prerequisite: DANC 3212 or previous dance experience. Advanced classical ballet stressing beats, jumps, turns, pointe work, partnering, repertory, performance, and the development of individual style. Continuation of DANC 3212. Two credit hours.

DANC 4212 Ballet VIII
Prerequisite: DANC 4211 or previous dance experience. Continued advanced classical ballet, stressing beats, jumps, turns, pointe work, partnering, repertory, performance, and the development of individual style. Two credit hours.

DANC 4221 Modern VII
Prerequisite: DANC 3222 or previous dance experience. Advanced techniques with emphasis on refinement of turns, falls, leaps, combinations. Performance stressed. Two credit hours.

DANC 4222 Modern VIII
Prerequisite: DANC 4221 or previous dance experience. Advanced techniques integrating the various styles and individual performance. Two credit hours.

DANC 4354 Dance Criticism and Concepts
This course examines dance forms, personalities, trends, and criteria for critical and appreciative viewing of the dance. Three credit hours.

DANC 4373 Independent Choreographic Project
Prerequisites DANC 3271, 3272. A required course designed for senior-level dance students to stage original work. Three credit hours.
Dance Activities (DNAC)

**DNAC 1124 Folk and Square Dance**
Fundamental movement patterns: step analysis, techniques of leading and following, dance positions, and dance formations in folk and square dance. One credit hour.

**DNAC 1125 Ballroom Dance**
Fundamentals in ballroom dancing: dance posture, footwork, leading and following, positions, etiquette, steps, and patterns. Dances will include two-step, cha-cha, waltz, swing, jitterbug, lindy, shag, fox trot, rhumba, Charleston, tango, and contemporary dances. One credit hour.

**DNAC 1126 Tap Dance I**
Relationship of style and characteristics to various types of tap dance. Emphasis on rhythmic accuracy, analysis, repertory, and composition. Specific teaching methods will be included. One credit hour.

**DNAC 1127 Jazz Dance I**
Introduction to basic techniques of jazz, with emphasis on specific teaching methods. One credit hour.

**DNAC 1128 Modern Dance I**
Introduction to fundamentals of modern dance, elements and qualities of movement, classification of movement, conditioning exercise, and individual and group studies combining dance movements. One credit hour.

**DNAC 1129 Ballet I**
Introduction to basic techniques of ballet. One credit hour.

**DNAC 1130 Aerobic Dance**
A dance exercise class that provides an opportunity for students to tone muscles; condition the heart, lungs, and blood vessels; burn calories; and relax. One credit hour.

**DNAC 2128 Modern Dance II**
Prerequisite: DNAC 1128 or equivalent. Review of fundamentals of modern dance. Theory and practice of dance composition, with emphasis on improvisation and performance. One credit hour.

**DNAC 2129 Ballet II**
Prerequisite: DNAC 1129 or equivalent. Review of fundamentals of ballet. Intermediate techniques of ballet. One credit hour.

**DNAC 3129 Ballet III**
Prerequisite: DNAC 2129 or equivalent. Refined techniques needed for adagio and allegro combinations. One credit hour.

**DNAC 4129 Ballet IV**
Prerequisite: DNAC 3129 or equivalent. Theory and practice to develop individual style and teaching responsibilities. One credit hour.

Dramatic Arts Technologies (DRAT)

**DRAT 3310 Computer Rendering**
Prerequisite: DRTE 1380, or consent of instructor. Instruction in the use of computers and software/hardware applications as tools toward an actualized final dramatic design rendering and/or choreography. Emphasis will include computer rendering techniques, hard-copy acquisition, and practical presentation/delivery issues. Laboratory required. Three credit hours.

**DRAT 3314 Computer Aided Design in the Dramatic Arts I**
Prerequisite: DRTE 1380 or consent of instructor. Introduction to computers as a dramatic design and drafting tool. Computer specific techniques for 2-D design, drafting, and data processing as it relates to the design. Laboratory required. Three credit hours.

**DRAT 3320 Animation in the Dramatic Arts**
Prerequisite: DRTH 2200 or consent of instructor. Introduction to 3-D computer animation and graphics in the dramatic arts as they relate to design (scenic, lighting, kinetic, etc.), performance, and narrative aesthetics. Students will
Drama Education (DRED)

DRED 3316 Creative Drama
An introductory course on the use of drama in education. Emphasis on learning techniques to help children learn academic subject matter and develop strong self-concepts. Three credit hours.

Drama Performance (DRPE)

DRPE 1160, 1161, 2160, 2161, 3160, 3161, 4161, 4162 Stage Production
Prerequisite: consent of the department chairperson needed if more than one credit hour is desired in any one semester. Emphasizes the practical application of performance and technical theatre principles through participation in stage productions sponsored by the department. Courses 3160, 3161, 4161, and 4162 require higher levels of responsibility and achievement. One credit hour.

DRPE 1260 Stage Combat
Techniques of stage fighting, falls, faints, slaps, and use of weapons and athletic movement on stage. Two credit hours.

DRPE 2359 Musical Theatre Workshop
A performance course in the techniques of musical theatre; involves acting, dancing, and singing in the theatrical context. Three credit hours.

DRPE 2360 Acting I
Basic theories of acting with projects and illustrations of various aspects of acting, characterization, and creative process. Three credit hours.

DRPE 3330 Oral Interpretation
Prerequisite: a course in English literature. A study of oral interpretation as a means of understanding literature as experience. Focus on the study of contemporary poetry and short fiction through performance of the speaking voices. Three credit hours.

DRPE 3332 Readers’ Theatre
Adapting and performing materials for readers’ theatre. Three credit hours.

DRPE 3350 Voice and Movement
Prerequisite: DRPE 2360, consent of the instructor. Focuses on building a process for correct, healthy voice usage in performance, in combination with movement training. Three credit hours.

DRPE 3351 Acting II
Prerequisites: DRTH 2200 and DRPE 2360. A performance course in script analysis and characterization. Emphasis on some study, development of skills in character conception, and performance theory. Three credit hours.

DRPE 3360 Children’s Theatre
Various techniques used in producing children’s theatre with adult actors. Experience in scene design, lighting, costuming, acting, directing, and promotion. Class work plus participation in at least one production of a full-length play. Three credit hours.

DRPE 3361 Theatre Practicum
Designed for advanced theatre students; covers all phases of play production. Participation in plays is required. Three credit hours.

DRPE 3362 Directing I
Prerequisites: DRTH 2200, DRPE 2360, junior standing, consent of instructor. Introduction to the basic principles and techniques of stage direction. Students gain practical experience by directing several short scenes. Three credit hours.

DRPE 4361 Directing II
Prerequisites: DRPE 2360, 3362. An advanced directing course dealing with the theory of directing and its practical application. Students are required to direct a one-act play. Three credit hours.

DRPE 4364 Experimental Theatre
Prerequisites: DRPE 2360, consent of instructor. A senior-level course for advanced students interested in working with new scripts or original ideas of making a play in an experimental situation. Open to actors, directors, and playwrights who have had the lower-level courses in those areas. Three credit hours.

DRPE 4160, 4260, 4360 Independent Study
Prerequisites: senior standing, theatre arts major, consent of instructor. Advanced research on selected topics. One, two, or three credit hours.

DRPE 4369 Internship in Theatre Performance
Prerequisites: DRPE 1160, 2160, 3160; for an internship with an acting concentration: DRPE 2360, 3350, 4350 or 4351, performance in at least one major production; for directing concentration: DRPE 2360, 3362, 4361, direction of department production with at least one (and preferably three) acts; for dance concentration: DRPE 1251, 1252, performance in at least one major dance group. An advanced performance course in which the student will work with established theatre/dance groups. The student must apply for a faculty supervisor for the project and obtain approval of the department chairperson. The assignment will be off campus with a professional group. Three credit hours.
Design/Technical Theatre (DRTE)

DRTE 1180 Theatrical Makeup
A practical course in makeup for the stage. Includes theory, types, designs, and application of makeup for the theatre. One credit hour.

DRTE 1380 Stagecraft
Study of technical production, terminology, and techniques. Subjects include tools and materials, construction, scene painting, rigging, and staging techniques. Course includes lecture and production involvement. Laboratory required. Three credit hours.

DRTE 2310 Costume Techniques
This course is designed to train the student in the construction of period and modern stage costumes, masks, and accessories. In addition to sewing techniques, the student will be exposed to methods of dyeing, painting, and printing fabric. Laboratory required. Three credit hours.

DRTE 2382 Makeup III
Prerequisite: DRTE 1180. Students will study advanced makeup techniques with emphasis on three-dimensional work such as prosthetics and life masks. Three credit hours.

DRTE 3380 Stage Lighting
Study of lighting for the theatre. Introduction to principles, equipment, and class projects in lighting design. Laboratory required. Three credit hours.

DRTE 3381 Scene Design
Prerequisite: DRTE 1380. Application of design theory to the theatre. Introduction to periods, styles, and techniques of scenic embellishment. Class projects in script analysis, sketching, rendering, and model construction. Three credit hours.

DRTE 3382 Costume Design
The student will study the use of universal design theory as applied to theatrical costumeing, period, style, and characterization, with emphasis on the production process. Three credit hours.

DRTE 3383 History of Costume
A survey of the history of costumes from ancient to modern times, with emphasis on use in the theatre. Three credit hours.

DRTE 4180, 4280, 4380 Independent Study
Prerequisites: senior standing, theatre arts major, consent of instructor. Advanced research on selected topics. One, two, or three credit hours.

DRTE 4381 Theatre Management
A comprehensive view of theatrical producing and management in America; history, theory, and practice. Includes legal, operational, and policy-making procedures, public relations and publicity, finance and budget control, press control, press relations, box office procedures, and house management. Three credit hours.

DRTE 4382 Theatre Architecture
An in-depth study of theatre architecture from primitive to present, with emphasis on the evolution of architectural elements and new theatre design concepts. Three credit hours.

DRTE 4383 Internship in Technical Theatre
Prerequisites: DRTH 1160, 2160, 3160; for an internship with a design concentration: DRTH 3380 or 3381, experience on a major technical/design project as crew head; for costume concentration: DRTH 2320, 3382, 3383, experience on a major costume project as crew head; for management concentration: DRTH 4350 or 4351, 4381. An advanced technical course in which students work off campus in a technical capacity with established professional theatre/dance groups. The student must apply for an internship supervisor for the project and obtain consent of the department chairperson. Three credit hours.

Drama Theory (DRTH)

DRTH 2200 Introduction to Theatre and Dance
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of theatre and dance, vocabulary and descriptive terms used in these disciplines, and how to write about them. Attendance at arts events is required. Students learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with ARHA 2200 Introduction to Visual Arts and MUHL 2200 Introduction to Music. Two credit hours.

DRTH 2352 Script Analysis for Production
Basic script analysis from the viewpoint of the playwright, performer, director, and designer; an intense analysis of representative plays. Three credit hours.

DRTH 3340 Seminar in Contemporary Theatre Production
A seminar in contemporary theatre production which may include a New York City theatre tour or a trip to other theatrical centers. Students are required to write a paper reflecting an area of knowledge gained from this theatrical experience, to be presented on return to campus. Three credit hours.

DRTH 4140, 4240, 4340 Special Topics in Theatre Arts
Special topics for the study of plays, playwrights, theatrical periods, styles, and production methods. Emphasis on directed readings, research, and casebook studies. The content and course subtitle change each time offered. Refer to semester class schedule for a descriptive title of the content. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, or three credit hours.

DRTH 4350 History of Theatre I
Prerequisite: DRTH 2200 or consent of instructor. Stage conventions, theatre architecture, dramatic literature, and acting styles trace the history of theatre from its origins to the Restoration. Three credit hours.

DRTH 4351 History of Theatre II
A comprehensive view of the development of theatre from the Restoration to the present. Three credit hours.

DRTH 4352 Dramatic Criticism
Prerequisite: senior standing. A study of critical theories of the theatre from Aristotle to the present. Three credit hours.

DRTH 4359 Playwriting
Various projects in creative writing for the theatre; studies in development of plot, action, character, and dialogue. Each student is required to complete an original
Early Childhood Education (ECED)

ECED 2200 Field Experience I
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2300 and 2400. This field experience will a) acquaint students with a variety of preschool and kindergarten group experiences, and b) provide a nine-week specific preschool-kindergarten classroom. Students will be oriented to the structure of a school district, the school, and the classroom setting. All concurrent courses may assign specific tasks to students during the nine-week classroom placement. Two credit hours.

ECED 2300 Introduction to Early Childhood Education
Prerequisite: admission to early childhood education program and completion of the Orientation to Teaching semester. Students are introduced to the early childhood education profession. The history and current issues in early childhood education are explored. Infant, toddler, preschool, kindergarten, and primary education are explored from a developmentally appropriate practice perspective. The concepts of inclusion, interaction of family, community, school, and multiculturalism are explored in the context of legal and ethical considerations. Three credit hours.

ECED 2301 Language and Literature and Literacy I
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2200. Students will become acquainted with the value of literature shared in active learning environments, especially designed for young children. This course includes an extensive view of literature written for children from birth through age eight with an examination of developmentally appropriate ways to interact with children about books and stories. Students will develop activities and implement them in a field placement. Three credit hours.

ECED 2400 Child Growth and Development
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2200. Study of environmental and hereditary influences on cognitive, affective, and psycho-motor development of typical and atypically developing children from birth to adolescence. Students consider both predictable developmental patterns and unique patterns due to sexual, socioeconomic, cultural, and normal variations in inherited characteristics. Students observe, record, and analyze the behavior and development of children in an educational setting. Concurrent enrollment in ECED 2200 is required. Four credit hours.

ECED 3200 Field Experience II
Prerequisites: admission to early childhood education program and completion of the Introduction to the Profession semester; concurrent enrollment in ECED 3200, 3301, and 3304. The second field experience is focused on working with children in groups. Students spend one day a week in a classroom with young children. They are expected to complete assignments related to early literacy, mathematics, and guidance. During the experience, they will continue development of their professional portfolio and community resource file. Two credit hours.

ECED 3201 Field Experience III
Prerequisites: admission to early childhood education program and completion of the Children in Groups semester; concurrent enrollment in ECED 3302, MATH 3301, and LANG 3224. This field experience provides an opportunity for students to observe, participate, and teach children. Literacy, mathematics, science, and the creative arts are emphasized in the teaching experience. The use of technology in the classroom and school to plan and teach are highlighted. Students will plan, make necessary educational materials, teach, and reflect on the experience. Two credit hours.

ECED 3300 Guiding Young Children
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2300 and 2400. Students will learn theoretical bases and developmentally appropriate practices in guiding young children toward socialization and a self-discipline. They will also learn how to design and maintain effective learning environments in a multicultural setting. Students will apply guidance strategies in field placement and design developmentally appropriate guidance and classroom management plans. Three credit hours.

ECED 3301 Language, Literature, and Literacy II
Prerequisites: admission to early childhood education program and completion of the Introduction to the Profession semester. Literacy I focuses on the foundations of emergent and early literacy in a natural learning environment for preschool through early primary. Emphasis will be given to learning to teach through the composition of a balanced literacy program with special attention placed on designing and managing literate environments, appropriate book selection, language development activities, and using observational assessment strategies to guide instruction. Three credit hours.

ECED 3302 Language, Literature, and Literacy III
Prerequisites: admission to early childhood education program and completion of the Children in Groups semester. This course parallels Literacy I, but addresses the needs of children at a higher literacy level. Literacy II focuses on the foundations of early and fluent stages of literacy in a natural learning environment for kindergarten through fourth grade children. Emphasis will be given to learning to teach through the components of a comprehensive literacy program with special attention placed on designing and managing literate environments, appropriate book selection, word building activities to promote visual processing strategies, comprehension development, and using observational assessment strategies to guide instruction. Three credit hours.

ECED 3304 Integrated Science: Preschool and Primary
Prerequisites: admission to early childhood education program and concurrent enrollment in ECED 2200. Students will be acquainted with the standards for science or early childhood developed by the State of Arkansas and the American Association for the Advancement of Science. Developmentally appropriate content and teaching strategies for preschool and primary grade science and their underlying theoretical bases will be presented. Students will be expected to develop activities and to implement them in a field placement. Concurrent enrollment in ECED 3200 is required. Three credit hours.

ECED 4101 Licensure Seminar
Review of program theory and practice. Prepares students for Praxis II examinations. Students must successfully attain the standards set by the Arkansas State Board of Education.

ECED 4301 Internship Seminar I
This seminar is designed to teach advanced strategies in guidance, teaching, planning, and professionalism. The course will review material previously covered in the program of study and explore it at a more complex level. Particular attention is focused on the teacher as decision maker and the link between assessment and pedagogical decision-making. All aspects of the class will ask students to connect the course content to their daily experiences in their internship classroom. A major assignment in the course will be to write detailed lesson plans for the week in their internship when they will be responsible for all classroom planning and teaching. Three credit hours.

ECED 4302 Diagnosis and Assessment of Young Children
A study of fundamental observation, assessment, and evaluation concepts and tools. Emphasis will be placed on both qualitative and quantitative methods of assessing infant development. Principles of classroom test construction, alternative assessment techniques, and measurement strategies at various developmental levels will be addressed. Students will learn to accurately interpret standardized test results and be exposed to ethical and legal considerations surrounding use and reporting of assessment results. Three credit hours.

ECED 4303 Early Childhood Education: Advanced Curriculum
Prerequisites: admission to teacher education program or consent of instructor. Students develop an extensive kindergarten curriculum guide that emphasizes learning center extension of concept teaching. Theoretical issues in curriculum development are studied. Must be taken during the preprofessional semester. Three credit hours.

ECED 4304 Practicum for Early Childhood Education
Prerequisite: admission to teacher education program or consent of instructor. Students will analyze organization techniques and teaching methods used in early childhood settings. The application of teaching methods and techniques in the development and implementation of lesson plans that include mainstreamed and multicultural settings. Three credit hours.

ECED 4306 Early Childhood Social Studies
This course provides the opportunity for students to analyze and develop integrated curricula in social studies from a variety of historical and current perspectives, within the context of professional, state and local standards. Students integrate knowledge from the six disciplines of social studies (history, anthropology, sociology, political science, geography, and economics) into the design of a constructivist, inquiry-based social studies curriculum. The course explores ways children come to learn about themselves and others. There is an emphasis on meeting the needs of all children, including attention to diverse linguistic and cultural backgrounds, and different learning abilities and styles.

ECED 4399 Early Childhood Assessment
A study of fundamental assessment, and evaluation concepts and tools. Emphasis placed on both qualitative and quantitative methods of reporting student progress. Principles of classroom test construction, alternative assessment techniques, and measurement strategies at various developmental levels will be addressed. Students will learn to accurately interpret standardized test results and be exposed to ethical and legal considerations surrounding use and reporting of assessment results. Three credit hours.

ECED 4401 Internship Seminar II
Prerequisites: completion of the Teaching the Curriculum semester and concurrent enrollment in ECED 4601. Internship II. The Professional Seminar focuses on the student’s completion of the ed TPCC. Topics include analysis of field experiences; review of legal issues affecting educational practice; preparing for job interviews; preparation for the first teaching year; maintaining a professional portfolio to demonstrate progress in professional development; and meeting the Arkansas Teacher Licensure Standards. Concurrent enrollment in ECED 4602 Internship II is required. Five credit hours.

ECED 4600 Internship I
Designed for the student to begin by observation and participation and gradually assume complete responsibility for the classroom. They will plan, teach, and reflect on the experience. Students will prepare for children with special needs. Use all of the resources of the school and exhibit competence with technology is expected. Six credit hours.

ECED 4601 Internship II
A final field experience for students. They plan, teach, and reflect on the experience. They prepare for special needs children. They participate in all the activities of the school. They use all of the resources of the school and exhibit competence with technology. Six credit hours.
Electronics and Computer Engineering Technology (ECET)

ECET 1302 Introductory Experience in Technology and Computers
A project-based experiential learning course to modern technology through hands-on laboratory activities, team work, and cooperative learning, and problem solving. Introduction to design process and reverse engineering. Five hours of integrated lecture lab. Three credit hours.

ECET 1404 Circuit Analysis
Prerequisites: A grade of C or greater in ECET 1302 or consent of instructor, and MATH 1302. A study of DC (direct current) circuit analysis techniques using resistors, inductors, and capacitors as circuit elements. Network theorems and introduction to AC analysis. Three hours lecture and three hours lab. Four credit hours.

ECET 2100 Methods of Engineering Computation
Corequisite: MATH 1303. Use of microcomputers for technical data analysis, manipulation, and reports. Application of the computer to engineering problem solving. One hour lecture and one hour lab. One credit hour.

ECET 2105 Circuits and Simulation Laboratory
Corequisite: ECET 2305. Laboratory experiments to supplement classroom instruction in ECET 2305. Introduction to electronics simulation software and its applications to laboratory exercises. Three hours lab. One credit hour.

ECET 2150 Microprocessor Fundamentals
Prerequisites: A grade of C or greater in ECET 1404, sophomore standing. Study includes number systems, basic types of instructions and addressing modes, and an overview of the functional organization inside a microprocessor. One hour lecture. One credit hour.

ECET 2152 Introductory Digital Laboratory
Corequisite: ECET 2352. Lab exercises to provide practical knowledge of logic devices and their applications. One three-hour lab. One credit hour.

ECET 2169 Sophomore Design Project
Prerequisite: sophomore standing. Schematic layout through CAD; PCB design to include SMT components; complete fabrication with mechanical consideration, and casing. Both written report and oral presentation are required. Three hours lecture lab. One credit hour.

ECET 2191 Cooperative Education
Prerequisites: sophomore standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester. Industrial experience under supervision of faculty advisor to supplement course work. Students who take this course may not take 2291. Requires at least 240 contact hours on the job. One credit hour.

ECET 2291 Cooperative Education
Prerequisites: sophomore standing and approval of department’s chairperson; cumulative GPA of 2.50; minimum GPA of 2.30 for previous semester. Industrial experience under supervision of advisor to supplement course work. Students who take this course may not take 2191. Requires at least 480 contact hours on the job. Two credit hours.

ECET 2300 Numerical Methods for Technologists
Prerequisite: IFSC 1202 or equivalent. Corequisite: MATH 1311. An introductory course in symbolic language programming with application to engineering problems. Related material in numerical methods of solution is presented. Five hours of combined lecture and laboratory. Two credit hours.

ECET 2305 Circuit Analysis II
Prerequisites: grades of C or greater in ECET 1404, MATH 1303. A study of the steady state and transient AC electrical circuits. The applications of the concepts of inductive reactance, capacitive reactance, and complex impedance to the solutions of AC circuits, series and parallel resonance, and power. Three hours lecture. Three credit hours.

ECET 2330 Electronics and Controls
Prerequisite: a grade of C or greater in ECET 2405. Intended for majors other than electronics and computer engineering technology. Fundamental elements of power electronics needed to understand the operation and maintenance of electronic equipment. Introduction of power semiconductor devices including diodes and thyristors. The electronic control of motors, including variable frequency drives. Controlling the operation of equipment and processes with programmable logic controllers. Two hours lecture, three hours laboratory. Three credit hours.

ECET 2352 Introduction to Digital Systems
Prerequisite: a grade of C or greater in ECET 1404 or equivalent. Introduction to digital circuits and systems. Number systems, Boolean algebra, and applications of basic logic gates; exercises in analysis and design of combinational and sequential logic circuits, including encoders, decoders, multiplexers, flip-flops, registers, and counters. Microprocessor architecture software and programming. Three hours lecture. Three credit hours.

ECET 2405 Electrical Technology
Prerequisite: a grade of C or greater in MATH 1303. Corequisite: PHYS 1322 and 1122. An introductory course in electrical technology for majors other than electronics and computer engineering technology. A review of basic quantities including current, voltage, power, and energy. An introduction to machines and transformers, including direct current motors, induction motors, stepper motors, synchronous generators, and transformers. Three hours lecture, three hours lab. Four credit hours.

ECET 3191 Cooperative Education
Prerequisites: junior standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50, minimum GPA of 2.30 for previous semester. Industrial experience under supervision of advisor to supplement course work. Students who take this course may not take 3291. Requires at least 240 contact hours on the job. One credit hour.

ECET 3291 Cooperative Education
Prerequisites: junior standing in engineering technology and approval of department’s chairperson; cumulative GPA of 2.50, minimum GPA of 2.30 for previous semester. Work experience related to student objectives under supervision of advisor. Students who take this course may not take 3191. Requires at least 480 contact hours on the job. Two credit hours.

ECET 3300 Independent Study
Prerequisite: consent of instructor. Study of assigned topics chosen to develop investigative, analytical, research, or professional skills related to engineering. The student is expected to spend 8 to 10 hours per week on the project. The exact hourly commitment depends on the complexity of the project and is agreed on in advance by the student and the instructor. Three credit hours.

ECET 3308 Robotics and Programmable Logic Controllers (PLCs)
Prerequisite: grade of C or greater in ECET 1404 or 2405. A study of operation of PLCs, including ladder logic programming and interfacing to industrial-type equipment, such as motors. Programming topics include bit addressing, timers, counters, and switches. The application of PLCs for robotic control will be examined. Two hours lecture, three hours lab. Three credit hours.

ECET 3316 Power Systems and Equipment
Prerequisites: grades of C or greater in ECET 2303, MATH 1311. Basic principles of AC power systems analysis, with emphasis on three-phase systems. Load and fault analysis and economical operation. Major types of systems, including motors, generators, transformers, and switching and control equipment. Two hours lecture, two hours lab and recitation. Three credit hours.

ECET 3350 Microprocessor Systems
Prerequisite: a grade of C or greater in CSYC 2382 or ECET 2180. Survey of addressing modes and instructions. Some hardware is introduced and electronic signals are related to software statements. Three hours lecture. Three credit hours.

ECET 3360 Data Acquisition and Sensors
Prerequisite: grade of C or greater in ECET 2300, 2352, and 3406; or consent of instructor. A practice-oriented course emphasizes the use of sensors in instrumentation and control and provides an understanding of the techniques of acquisition and manipulation of experimental and sensory data using computer hardware and software to build a coordinated and optimal automated system. Principles of process control using personal computers to provide an inexpensive solution for isolated or small-scale industrial process control are also discussed. Two hours lecture, three hours lab. Three credit hours.

ECET 3405 Electronic Devices I
Prerequisites: grades of C or greater in ECET 2305 and 2105. A study of the characteristics and applications of electronic elements including diodes, BJTs, and op-amps. Includes load lines, biasing techniques, single and multistage signal amplifiers, power amplifiers, and transistor switching characteristics. Laboratory exercise also includes computer simulation. Three hours lecture, three hours lab. Four credit hours.

ECET 3406 Electronic Devices II
Prerequisite: a grade of C or greater in ECET 3405. A detailed study of the operational amplifier, including gain considerations and frequency response. Selected applications of the op-amp to instrumentation, control, and active filters; computer-aided analysis is fully integrated into all topics. Other topics include oscillators and timing circuits. Three hours lecture, three hours lab. Four credit hours.

ECET 3409 Applied Transform Methods
Prerequisites: grades of C or greater in ECET 3406 and MATH 1312. Laplace transform method applied to network analysis, filters, and feedback systems. Fourier series and Fourier transform techniques with application to communication signals. Introduction to Z transform for digital signal processing. The laboratory projects include computer simulation using Matlab. Three hours lecture, three hours lab. Four credit hours.

ECET 4199 Special Technical Topics I
Prerequisite: consent of instructor based on relevance of subject matter to student career goals. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Meets equivalent of one hour. One credit hour.

ECET 4304 Industrial Controls
Prerequisites: a grade of C or greater in ECET 4407. A detailed study of industrial control devices around microprocessor controlled. Practical applications are emphasized. Topics include interface devices, such as opto-isolators and solid state relays. Two hours lecture, three hours lab. Three credit hours.

ECET 4306 Data and Computer Communications
Prerequisite: a grade of C or greater in ECET 3409. Discusses principles and practices in data communications with emphasis on the hardware aspects of data communication. Topics include transmission, encoding, decoding, data interfacing, error detection and correction, link control, networking and protocols. Inter-networking over the internet. Three hours of lecture. Three credit hours.
Three protocols

Prerequisites:

ECET 4351 System Design
Prerequisites: grades of C or greater in ECET 3409 and 4450, or consent of instructor. Methods of approaching design problems, software control of hardware, modeling of applications, hardware/software trade-offs in the design process. Students work in teams to solve a substantive design problem. The course integrates at the system level the hardware/software knowledge of the electronics and computer engineering technology major. Three hours lecture. Three credit hours.

ECET 4353 Optical Electronic Devices and Systems
Prerequisites: grades of C or greater in ECET 3406 and 4407. Applications of optoelectronic devices to communications, robotics, and automated manufacturing. Two hours lecture, two hours lab. Three credit hours.

ECET 4354 Computer Hardware Architecture
Prerequisites: grades of C or greater in ECET 3350, 4407. Study of the various hardware designs and their relationship to architecture. Includes an overview of mainframe, supercomputers, and multicomputers. Three hours lecture. Three credit hours.

ECET 4362 Real-Time Systems
Prerequisites: grades of C or greater in ECET 3390 and CPSC 2376 or equivalents. Real-time specification and design techniques, real-time kernels, intertask communication and synchronization, real-time memory management, system performance analysis and optimization. Three hours lecture. Three credit hours.

ECET 4363 Network Technology and Management
Prerequisite: grade of C or greater in ECET 4306. A continuation of the studies of the principles and practices in data communication and includes topics such as switches and switching fabric, frame relay, ATM, and emerging technologies. Protocols and techniques for monitoring and managing computer networks, and computer security issues are discussed. Two hours lecture and two hours lab. Three credit hours.

ECET 4370 Senior Design Project
Prerequisite: grade of C or greater in ECET 4351. Students work independently with a faculty mentor on a design/research problem. The project could be developed through industry collaboration, faculty research, or at the student’s own initiative through literature search. The project requires electronics and computer engineering technology faculty approval, formal oral and written presentation, and demonstration of the project. Students meet with the mentor weekly to discuss their designs. Five hours lab. Three credit hours.

ECET 4399 Special Technical Topics I
Prerequisite: consent of instructor based on relevance of subject to student career goals. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Meets equivalent of three hours. Three credit hours.

ECET 4407 Digital System Design
Prerequisites: grades of C or greater in ECET 2300, 2352, 2152, and 3405. Advanced concepts in digital system design to include programmable devices, and state machines using HDL. Laboratory projects include computer simulation. Three hours lecture, three hours lab. Four credit hours.

ECET 4450 Embedded Systems
Prerequisites: grades of C or greater in ECET 3350 and 4407. Techniques for interfacing micros to outside devices. Detailed analysis of bus standards, serial, and parallel input/output to peripherals. Laboratory includes the application of interfacing techniques to build a microcomputer and interface it to outside devices. Three hours lecture, three hours lab. Four credit hours.

ECET 4479 Communication Systems
Prerequisites: grades of C or greater in ECET 3406 and 3409. Spectral analysis of signals; noise; linear modulation and demodulation; AM, SSB, angle modulation and demodulation, phase locked loops, and digital communication techniques. Three hours lecture, three hours lab. Four credit hours.

ECET 4480 Digital Communication
Prerequisite: a grade of C or greater in ECET 4479. Advanced study of techniques and hardware employed in digital, microwave, satellite, and fiber optic communications. Three hours lecture, three hours lab. Four credit hours.

Economics (ECON)

ECON 2301 Survey of Economics
The wants of individuals and societies are unlimited, while the resources for satisfying these wants are limited. Consequently, choices have to be made. Economics is the science of choice. Survey of Economics introduces students to the ability to use theories or models to make sense out of the real world and devise policy solutions to economic problems. Both individual and firm choices (microeconomics) and society choices (macroeconomics) are examined. The role of markets in summarizing choices and allocating resources is introduced. ECON 2301 will not satisfy the University Core Curriculum requirements if ECON 2322 and ECON 2323 are taken for graduation credit. Three credit hours.

ECON 2310 Business Statistics I
Prerequisite: MATH 1342 with grade of C or greater. An introduction to statistical methods from an economic and business perspective, including descriptive statistics, index numbers, probability theory as applied to statistical analysis, and an introduction to hypothesis testing. Three credit hours.

ECON 2311 Business Statistics II
Prerequisite: ECON 2310. An introduction to regression analysis with emphasis on underlying assumptions, violations of assumptions, and possible corrective measures. Students are required to develop and estimate a realistic regression model and interpret results. Three credit hours.

ECON 2312 Quantitative Methods
Prerequisites: MATH 1342 with grade of C or greater, and ECON 2310. An introduction to quantitative methods frequently used in business. Topics include regression analysis, decision analysis and expected values, Chi-Square, sampling techniques, forecasting, linear programming, simulation, transportation, and queuing analysis. Students shall complete a term project. Three credit hours.

ECON 2322 Principles of Microeconomics
Prerequisite: MATH 1302. The theory of the individual firm in the economy, cost and price determination, income distribution, and welfare economics. Three credit hours.

ECON 2323 Principles of Macroeconomics
Prerequisite: MATH 1302 and ECON 2322. The monetary system, macroeconomic analysis of income, employment, price level, business fluctuations, and elements of international trade. Three credit hours.

ECON 3301 Survey of Economics
An overview of the science of economics. Basic economic laws and methods are presented followed by a survey of the two primary areas of economics: microeconomics and macroeconomics. Students will be introduced to the functioning of markets and the choice process individually and societies are faced with while making economic decisions. Not for credit by business or economics majors. Three credit hours.

ECON 3310 Money and Banking
Prerequisite: ECON 2323. The nature and functions of money and the development of the Federal Reserve System, the role and activities of the Federal Reserve in the development of monetary policy. Three credit hours.

ECON 3314 Mathematical Economics
Prerequisites: ECON 2311 or 2312, 2322, 2323. Analysis of economic problems and theory using mathematics. Mathematical methods are used to demonstrate economic principles. Three credit hours.

ECON 3315 Intermediate Microeconomic Analysis
Prerequisites: ECON 2311 or 2312, 2322, 2323. Price and production theory. Consumer demand, the supply function, market pricing, and various degrees of competition. Three credit hours.

ECON 3320 Business Forecasting
Prerequisites: ECON 2312, 2322, 2323. Business fluctuations; seasonal, cyclical, trend, and secular components; measurement of fluctuations; and methods of predicting changes in business activity. Three credit hours.

ECON 3330 Intermediate Macroeconomic Theory
Prerequisites: ECON 2322, 2323. National income analysis and its implications for public policy; its historical development and present status, including recent business cycle development. Three credit hours.

ECON 4305 Advanced Microeconomics
Prerequisite: ECON 3315 or equivalent. Theoretical microeconomics covering the theory of distribution, general equilibrium, welfare economics, and other advanced topics. Three credit hours.

ECON 4310 History of Economic Thought
Prerequisites: ECON 2322, 2323. The development of contemporary economic theory. A study of the development of economic concepts, methods of analysis, and philosophies and their relation to contemporary theory. Three credit hours.

ECON 4320 International Economics
Prerequisites: ECON 2322 and 2323. The theory and mechanics of international trade; balance of payments problems, commercial policy, and international investments. Three credit hours.

ECON 4322 Resource Economics
Prerequisites: ECON 2322 and 2323 or equivalents. Applied microeconomics concentrating on natural resources as they are used to maximize society’s total utility. Both the theoretical and actual aspects of natural resources as inputs to the production process are explored. Three credit hours.
ECON 4324 Environmental Economics
Prerequisite: junior standing. Applied microeconomics covering various aspects of environmental economics. The problems of preventing future pollution and cleaning past pollution in an economically efficient manner are explored. Economic theory, actual practice, and legal aspects of pollution are explored in the context of the trade-offs that must be considered. Three credit hours.

ECON 4330 Public Finance
Prerequisites: ECON 2322, 2323. The economic functions of government, public goods theory. Public sector decision making, financing, and consequences; public sector growth and institutions. Three credit hours.

ECON 4340 Labor Economics
Prerequisites: ECON 2322, 2323. Economics of labor as a factor in the production process; legislative aspects of labor-management relations; measurement of human capital; effects of union growth; role of organized labor in the economy. Three credit hours.

ECON 4344 Introduction to Financial Economics
Prerequisites: ECON 2323 or equivalent. Survey of capital markets and security market efficiency and introduction to portfolio theory, capital asset pricing, and agency theory. Implications for corporate financial policy decisions and financial market regulatory policy. Three credit hours.

ECON 4347 Economics of Development
Prerequisites: ECON 2322 and 2323 or equivalents. The study of how countries change their productive arrangements and change real per-capita income over time. Various development strategies are discussed. Three credit hours.

ECON 4360 Independent Study
Prerequisites: senior standing, economics major, completion of at least 9 hours of upper-level economics courses with a grade of C or greater, cumulative GPA of 2.50, and consent of department chairperson prior to registration. Designated to complement and extend the classroom learning experience through the application of theories and concepts in a professional work environment. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities are dependent upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is accepted as elective credit in the economics major. Three credit hours.

ECON 4397 Seminar in Economics
Prerequisites: senior status and consent of faculty teaching course. Advanced economic topics in modular format and usually team taught. Topics will come from both the microeconomic and macroeconomic areas and may vary according to need. Three credit hours.

Educational Foundations (EDFN)

EDFN 4100 Career Planning and Life Options
A systematic approach to developing decision-making skills and an orientation to the world of work. The focal point of the course is the student and his or her goals. Emphasis is on clarifying and formulating realistic career goals and an appropriate career plan and strategy to achieve these goals. Credit/no credit. One credit hour.

EDFN 2300 American Education
Prerequisite: sophomore standing. The philosophical, sociological, psychological, and historical foundations of American education, especially in public schools. The course will provide opportunities for each student to develop an official certification/degree plan and to apply for admission to the teacher education program. Three credit hours.

EDFN 3304 Assessment in the Middle School Curriculum
Study of available assessment methods and the integration of these methods in planning, modifying, and evaluating instruction, and in reporting outcomes to varied constituencies. After completing this course, students will meet basic assessment competencies as outlined in the Arkansas Principles for Licensure for Beginning Teachers and The Standards for Teacher Competence in the Educational Assessment of Students (1990). Three credit hours.

EDFN 3320 Introduction to Educational Psychology
Prerequisite: PSYC 2300. Applications of psychological principles to the learning and teaching processes; emphasis on learning, cognitive development, social development, discipline, intelligence, evaluation, and measurement. Three credit hours.

EDFN 4205 Diagnostic and Evaluative Procedures in Education
A study of fundamental statistical concepts and their use in understanding standardized test results. Emphasis on the exploration of qualitative methods and evaluating and reporting progress. Two credit hours.

EDFN 4158, 4258, 4358, 4458 Educational Foundations Workshop
Designed to strengthen offerings in education and meet the needs of teachers for further training at the in-service level. One, two, three, or four credit hours.

EDFN 4100, 4200, 4300, 4400, 4500 Independent Study in Educational Foundations
In-depth study of topics in educational foundations for pre-service elementary
Literature (ENGL)

ENGL 2335 Introduction to Literature
For the beginning student of literature. Topics vary and include selections from poetry, fiction, and drama. Three credit hours.

ENGL 2337 World Literature
Prerequisite: completion of the first year writing requirement. Study of selected texts reflecting various Western and non-Western literary heritages and traditions. Assignments represent several national literatures, with at least one major text from each of four periods (antiquity, medieval, early modern, and the modern period) and from a minimum of three literary genres. Three credit hours.

ENGL 2338 World Literature Themes
Prerequisite: completion of the first year writing requirement. This class addresses the same competencies as ENGL 2337, but through exploration of a specific topic. Either 2337 or 2338 satisfies the core requirement, but they are distinct courses and both may be taken for credit. Three credit hours.

ENGL 2339 Mythology
An introduction emphasizing Greek and Roman mythology and its influence on Western culture. Three credit hours.

ENGL 3321 American Literature I
Selected works from the earliest writings to American romanticism. Three credit hours.

ENGL 3322 American Literature II
Selected works from the period beginning with the romantic movement and ending with the Civil War. Three credit hours.

ENGL 3323 American Literature III
Selected works from the period beginning with the Civil War and ending in 1912. Three credit hours.

ENGL 3324 Arkansas Writers
A survey of Arkansas writers of the nineteenth and twentieth centuries. Three credit hours.

ENGL 3325 Literature of the South
Presentation of representative southern writers. Emphasis on writers of the southern renaissance of the twentieth century. Three credit hours.

ENGL 3326 African-American Literature I
African Americans in American culture from the colonial period to the twentieth century as expressed through the literary works of African-American writers. Three credit hours.

ENGL 3327 African-American Literature II
The writings of representative African American authors from 1900 to the present, with emphasis on the literature of Africa, the West Indies, and African-America. Three credit hours.

ENGL 3330 Approaches to Literature
Required for English majors. The course introduces the basics of literary research, critical methods, and critical writing. Though not a prerequisite for any other English course, students are strongly recommended to take this class early. Three credit hours.

ENGL 3331 Major British Writers I
Major writers of English literature to the mid-eighteenth century, including Chaucer, Shakespeare, and Milton. Three credit hours.

ENGL 3332 Major British Writers II
Major writers of English literature from the mid-eighteenth century to the present. Three credit hours.

ENGL 3340 Women in Literature
Literature by and about women, with emphasis on works by nineteenth- and twentieth-century writers. Three credit hours.

ENGL 3344 Modern Drama
A close analysis of selected British, American, and European plays. Three credit hours.

ENGL 3346 The Form and Theory of Fiction
Survey of the forms, techniques, and theories of fiction, emphasizing the views of fiction writers. Three credit hours.

ENGL 3360 Selected Topics in Literature
Special topics in literature, varying each semester. Topics cross geographic and temporal lines and usually deal with a specific genre or a theme. Three credit hours.

ENGL 3361 The Film as Literature
An introduction to the capabilities of film as literature, using many genres as illustration. Three credit hours.

ENGL 3370 Fundamentals of Folklore
The folklore process among Americans and other cultural groups. The dynamics of the folk event, the theory and applications of folklore, and practical field experience. Three credit hours.

ENGL 4100, 4200 Independent Study
Prerequisites: senior standing and 18 hours of English. Open to English majors only. For the student of superior ability who seeks special research in the field. One or two credit hours.

ENGL 4150, 4250 Honors Seminar
Prerequisite: consent of program director. Focused study of topics in language and literature. One or two credit hours.

ENGL 4160, 4260 Honors Tutorial
Prerequisite: consent of program director. Independent study of topics in literature and language. One or two credit hours.

ENGL 4199 Seminar in Career Perspectives
Required for majors. A capstone course for English majors for purposes of developing and assessing their career, educational, and personal goals. One credit hour.

ENGL 4202 Teaching Literature in Secondary Schools
A methods course team-taught by faculty from the Departments of English and Rhetoric. Topics to be addressed include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, approaches to teaching literature, and writing as a way to reading. To be taken in conjunction with RHET 4202. Dual-listed in the LIALR Graftauct as ENGL 5202. Two credit hours.

ENGL 4270 Honors Project
Prerequisite: consent of program director. Honor projects are typically scholarly or creative works. Program advisors and director must approve all projects. Two credit hours.

ENGL 4311 Medieval Literature
Representative works in English literature of A.D. 450 to 1500 as well as works in translation from medieval German, Latin, and romance literature. Three credit hours.

ENGL 4312 Chaucer
Selected works including Troilus and Criseyde and The Canterbury Tales. Three credit hours.

ENGL 4313 Arthurian Literature
A study of Arthurian chronicle and romance from Celtic beginnings through Malory, with examination of nineteenth- and twentieth-century developments of the legend. Three credit hours.

ENGL 4314 Topics in Medieval and Renaissance Literature
Selected topics in medieval and Renaissance literature. Three credit hours.

ENGL 4321 English Renaissance Drama
Major playwrights, including Marlowe, Kyd, Jonson, Beaumont, Fletcher, and Webster; excluding Shakespeare. Three credit hours.

ENGL 4324 Shakespeare
Selected works, including the major comedies and tragedies. Three credit hours.

ENGL 4325 Teaching Shakespeare Through Performance
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.

ENGL 4328 Seventeenth-Century Literature
English poetry and prose from 1600 to 1660, with emphasis on Donne and Milton. Three credit hours.

ENGL 4331 Restoration and Early Eighteenth-Century Literature
Restoration drama; Dryden, Swift, early Pope. Three credit hours.

ENGL 4332 Mid and Late Eighteenth-Century Literature
Later Pope, the novel, Johnson. Three credit hours.

ENGL 4341 Romantic Poetry
Representative works of Blake, Coleridge, Wordsworth, Byron, Keats, and Shelley. Three credit hours.

ENGL 4343 Victorian Literature
Representative writers, including Tennyson, Browning, Arnold, and Hopkins. Three credit hours.

ENGL 4345 Topics in Nineteenth-Century Literature
Selected topics in British and American literature of the nineteenth century. Three credit hours.

ENGL 4351 British Novel I
Representative readings in the development of the British novel in the eighteenth and nineteenth centuries. Three credit hours.

ENGL 4352 British Novel II
Representative readings in the development of the British novel in the twentieth century. Three credit hours.

ENGL 4355 Readings in European Fiction
Representative readings in European fiction from the eighteenth century to the present. Three credit hours.

ENGL 4360 Topics in Modern Literature
Selected topics in modern literature. Three credit hours.

ENGL 4364 Modern Poetry
Representative readings in modern English and American poetry including works by Hopkins, Yeats, Frost, and Eliot. Three credit hours.

ENGL 4365 Modern Novel
Reading of American and British novels of the Modernist period. Three credit hours.

ENGL 4366 Contemporary Literature
Trends in poetry, fiction, and drama since 1945, with emphasis on British, American, and European writers. Three credit hours.
ENGL 4367 Short Story Survey
Wide reading of American and foreign short fiction. Three credit hours.

ENGL 4368 Literary Criticism
The study of literary theory, with emphasis on recent issues. Three credit hours.

ENGL 4369 The Form and Theory of Poetry
Survey of the forms, techniques, and theories of poetry, emphasizing the views of poets. Three credit hours.

ENGL 4370 Seminar in Language or Literature
Prerequisites: senior standing and consent of instructor. Selected topics in language or literature. May be repeated when topic differs. Three credit hours.

ENGL 4371 Advanced Folklore: Selected Topics
Selected topics such as native American traditions, folklore in Arkansas, trickster motifs in oral and written story. Three credit hours.

ENGL 4380 Studies in Major American Writers
The study of one major figure in American literature. Subject varies. Three credit hours.

ENGL 4381 American Fiction
Representative readings in the development of American fiction. Three credit hours.

ENGL 4384 American Poetry
Representative readings in American poetry from the beginnings to 1912. Three credit hours.

ENGL 4390 Internship
Prerequisites: junior standing, consent of instructor. Provides practical experience in a professional setting. Students work in a business, school, state agency, or similar location that offers opportunities to apply their academic background and skills. Course may be repeated for credit. Three credit hours.

Creative Writing (ENGL)
Creative writing courses (except ENGL 2336) may be repeated for credit with written permission from the chairperson of the Department of English.

ENGL 2336 Introduction to Creative Writing
Prerequisites: RHET 1311, 1312, or consent of instructor. Study and practice in the writing of fiction, poetry, and drama. Class discussion/workshop. Three credit hours.

ENGL 3318 Fiction Writing I
Prerequisite: ENGL 2336 or consent of instructor. Study and practice in the writing of fiction. Class discussion/workshop and individual conferences. Three credit hours.

ENGL 3319 Poetry Writing I
Prerequisite: ENGL 2336 or consent of instructor. Study and practice in the writing of poetry. Class discussion/workshop and individual conferences. Three credit hours.

ENGL 3320 Screenwriting
Prerequisite: ENGL 2336. Individual work in dramatic writing for film and television. Class discussion and individual conferences. Three credit hours.

ENGL 3345 The Form and Theory of Poetry
See literature course listing.

ENGL 3346 The Form and Theory of Fiction
See literature course listing.

ENGL 4301 Advanced Creative Writing Project
Prerequisites: three creative writing classes or consent of instructor. Independent study in the writing of fiction, poetry, or drama. Three credit hours.

ENGL 4116, 4216, 4316 Seminar in Creative Writing
Prerequisites: ENGL 3398, 3399, or consent of instructor. Continued study and practice in creative writing. Class discussion/studio workshop/field placement. May be repeated when the topic varies. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, or three credit hours.

ENGL 4398 Fiction Writing II
Prerequisites: ENGL 2336, 3318, or consent of instructor. Continued study and practice in the writing of fiction. Class discussion/workshop and individual conferences. Three credit hours.

ENGL 4399 Poetry Writing II
Prerequisites: ENGL 2336, 3319, or consent of instructor. Continued study and practice in the writing of poetry. Class discussion/workshop and individual conferences. Three credit hours.
Language and Linguistics (ENGL)

ENGL 2311 Vocabulary Building
Study of Greek and Latin origins and word families. Three credit hours.

ENGL 3311 History of the English Language
Development of the English language from the Old English period to the present. Three credit hours.

ENGL 3312 Grammatical Analysis of Modern English
Studies in the structure of modern English. Three credit hours.

ENGL 3313 Introduction to the Study of Language
An introductory linguistics course. Includes phonology, syntax, and semantics. Three credit hours.

ENGL 3314 Social and Regional Dialects
A study of English dialects and the dynamics of dialectic variation and use. Three credit hours.

ENGL 4100, 4200 Independent Study
Prerequisites: senior standing. 18 hours of English Open to English majors only. For the student of superior ability who seeks special research in the field. One or two credit hours.

ENGL 4202 Teaching Literature in Secondary Schools
A team-taught methods course. Topics 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. Cross-listed with RHET 4202. Dual-listed in the UALR Graduate Catalog as ENGL 5202. Two credit hours.

ENGL 4325 Teaching Shakespeare Through Performance
Pedagogical focus on teaching Shakespeare’s plays in elementary and secondary schools by using performance activities. Special emphasis on Romeo and Juliet, Julius Caesar, Macbeth, and Hamlet. One comedy and one history play included by titles, may change each time the course is offered. Dual-listed in the UALR Graduate Catalog as ENGL 5325. Three credit hours.

ENGL 4370 Seminar in Language or Literature
Prerequisites: senior standing, consent of instructor. Selected topics in language or literature. May be repeated when topic differs. Dual-listed in the UALR Graduate Catalog as ENGL 5370. Three credit hours.

Environmental Health Sciences (ENHS)

ENHS 2320 Introduction to Environmental Health Sciences
Basic elements of environmental health sciences. Environmental health effects, water supplies, water pollution control, solid waste management (hazardous wastes), air pollution control, general environmental regulations. Lectures will be supplemented with class discussions and field studies. Three hours lecture per week. Three credit hours.

ENHS 3310 Environmental Regulations
Prerequisite: ENHS 2320 or equivalent. The basis for regulation of environmental pollutant sources and natural resources. The environmental litigation process is reviewed with reference to appropriate federal, state, and local regulations. Case studies will be used to supplement class lectures. Three hours lecture per week. Three credit hours.

ENHS 3340 Introduction to Water Resources Management
Prerequisites: ENHS 2320, CHEM 1403, MATH 1302, or the equivalents. Concepts related to the management of surface and ground water resources. Sources of environmental pollutants, sampling methods and pollution control alternatives; the application of computers to water resource management problems. Three hours lecture per week. Three credit hours.

ENHS 3350 Principles of Air Pollution
Prerequisites: ENHS 2320, CHEM 1403, MATH 1302, or the equivalents. The principles of air quality monitoring, air pollution transport and control methods; effects of air pollutants on health and natural resources; dispersion modeling techniques. Three hours lecture per week. Three credit hours.

ENHS 3391 Cooperative Education in Environmental Health Sciences
Prerequisites: junior standing, acceptance as an environmental health sciences major, minimum GPA of 2.50, and consent of program director. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their environmental education career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

ENHS 3415 Environmental Impact Analysis
Prerequisites: ENHS 2320 or equivalent, consent of instructor. Knowledge and skills necessary to prepare and review environmental impact assessments and statements. The content of the National Environmental Policy Act is presented and analyzed. Case studies and group discussions are used to supplement class lectures. Field studies are performed on a selected site for which an environmental impact assessment will be written. Three hours lecture, two hours laboratory per week. Four credit hours.

ENHS 3430 Environmental Epidemiology
Prerequisites: ENHS 2320, BIOL 2401, CHEM 1403, STAT 4350, or the equivalents. The principles of environmental epidemiology are introduced with emphasis on application to various environmental settings. A brief introduction to vital statistics is provided. Health effects of various environmental agents will be identified with appropriate indicators and epidemiological methods for environmental health sciences professionals to monitor environmental effects. Three hours lecture, two hours laboratory per week. Four credit hours.

ENHS 4189, 4289, 4389 Research in Environmental Health Sciences
Prerequisites: senior standing, consent of instructor. For students who want to carry out individual research. The student is expected to spend two to four hours per week on the project 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. One, two, or three credit hours.

ENHS 4190 Seminar in Environmental Health Sciences
Prerequisites: or corequisites: ENHS 2320, 3415, senior standing, consent of instructor. Discussions of current and emerging environmental health sciences problems. One hour of discussion per week. One credit hour.

ENHS 4320 Introduction to Industrial Hygiene
Prerequisites: ENHS 3310, CHEM 2450 or 3350 and 3150, MATH 1302, or the equivalents. Recognition, evaluation, and control methods for environmental hazards in the workplace; instrumentation techniques for personal and ambient sampling. Regulations appropriate to industrial hygiene are reviewed for various work settings. Three hours lecture per week. Three credit hours.

ENHS 4391 Cooperative Education in Environmental Health Sciences
Prerequisites: junior standing, major in environmental health sciences, minimum GPA of 2.50, minimum of one semester of ENHS 3391, and consent of program director. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their environmental education career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

ENHS 4199-4399 Special Topics in Environmental Health Sciences
Prerequisite: senior standing as environmental health sciences major or consent of instructor. Topics include specialized areas of environmental health sciences. Credit will vary and will be appropriate for both advanced undergraduate and graduate students. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, or three hours lecture per week. One, two, or three credit hours.
ENHS 4295-4695 Internship in Environmental Health Sciences
Prerequisites: senior standing, consent of instructor. Supervised internship with state, local, and federal agencies and industries concerned with environmental programs. Forty clock hours per hour of credit. Two, three, four, five, or six credit hours.

ENHS 4410 Environmental Planning
Prerequisite: ENHS 3310 or the equivalent. Environmental planning process and evaluation methods applicable to environmental programs; resource allocation and procurement; emphasis on environmental planning case studies including watershed planning, land use, solid and hazardous waste, air quality, wastewater treatment facilities planning, wetlands, and master planning. Group discussions and role-playing exercises will supplement class lectures. Three hours lecture.

ENHS 4295-4695 Internship in Environmental Health Sciences
Prerequisites: senior standing, consent of instructor. Supervised internship with state, local, and federal agencies and industries concerned with environmental programs. Forty clock hours per hour of credit. Two, three, four, five, or six credit hours.

Earth Science (ERSC)

ERSC 1102 Physical Geology Laboratory
Prerequisite or corequisite: ERSC 1302. A laboratory course designed to accompany ERSC 1302. Students observe, gather and manipulate data, interpret data, and make field measurements using minerals, rocks, graphs, and maps. The laboratory meets for two hours per week. One credit hour.

ERSC 1103 Historical Geology Laboratory
Prerequisite or corequisite: ERSC 1303. A laboratory course designed to accompany ERSC 1303. Students are involved with geologic data gathering, manipulation, and interpretation along with field measurements and problem solving. Two hours laboratory per week. One credit hour.

ERSC 1302 Physical Geology
An introduction to the science of geology, the geological view of the human environment, how geologists learn about Planet Earth, and how society and geology interact. Active learning applied to natural processes shaping the earth’s surface, producing the solid and fluid earth, and historical development of geological paradigms. Three hours lecture per week. Three credit hours.

ERSC 1303 Historical Geology
An introduction to the science of geology, how geologists have learned about the Earth using geologic time as a theme. Active learning applied to various measurements of time, the documentation of evolutionary changes presented by the geologic record, and the development of geologic paradigms used in interpreting this record. Three hours lecture per week. Three credit hours.

ERSC 2310 Mineralogy
Prerequisites: ERSC 1302/1102, CHEM 1402. Introduction to mineralogy including the silicate and nonsilicate groups, their crystalline structure, and their occurrence and origins as determined by chemical equilibria. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 2320 Geologic Methods
Prerequisites: ERSC 1302/1102, 1303/1103. Basic field, laboratory, and computer methods in geology. Outcrop description and interpretation, sampling techniques, sample preparation, measuring stratigraphic section, sediment analysis, Brunton compass techniques, geologic mapping, map interpretation, stream flow measurements, ground water measurements, and computer techniques. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 3311 Igneous and Metamorphic Petrology
Prerequisite or corequisite: ERSC 2310. Composition, characteristics, classification, occurrence, and petrogenesis of the igneous and metamorphic rocks. Megascopic and microscopic methods of description. Two hours lecture, three hours laboratory or equivalent per week. Three credit hours.

ERSC 3312 Optical Mineralogy
Prerequisite: ERSC 2310. Principles and methods of optical mineralogy; use of petrographic microscope in identification of minerals by immersion and in thin section. Two hours lecture, two hours laboratory per week. Three credit hours.

ERSC 3330 Structural Geology
Prerequisites: ERSC 2310, MATH 1303. Analysis of rock strength and rock deformation, analysis and description of folds, faults, cleavage, joints, and igneous bodies. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 3350 Sedimentology
Prerequisites: ERSC 2310, 2320. Analysis of modern sediments, properties of sedimentary grains, sedimentary processes; modern environments; composition, classification, lithification of sedimentary rocks. Megascopic and microscopic methods. Two hours lecture, three hours laboratory per week. Three credit hours.

ERSC 3360 Paleobiology
Prerequisites: ERSC 1303/1103, or BIOL 1401, or consent of instructor; ERSC 2320 recommended. 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, biostatigraphy, paleoecology, and macroevolution. Laboratories will focus on paleobiological principles that can be demonstrated by the major groups of invertebrates that are common in the geologic record. Two hours lecture, three hours laboratory per week; one 1-2 day field trip. Three credit hours.

ERSC 4371 Engineering Geology
Prerequisite: MATH 1303 or higher or the consent of instructor. 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 materials, slope stability analysis and slope failure mitigation, earthquake engineering, hydrologic system management, and the application of GIS and geology. Dual-listed in the UALR Graduate Catalog as ERSC 5371. Two hours lecture, two hours laboratory per week. Three credit hours.
ERSC 3372 Surficial Hydrology
Prerequisites: MATH 1304 or 1311 and consent of instructor; junior standing in earth science, physics, chemistry, biology, environmental health science, or engineering technology. Hydrologic cycle, basin analysis, runoff analysis, stream hydraulics, flooding, case histories, field methods in hydrology, hydrologic planning. Three hours lecture per week. Three credit hours.

ERSC 3390 Weather Studies
Prerequisite: 4 hours of earth science, biology, chemistry or physics. This course provides an overview of how the distribution of heat, atmospheric circulation, humidity, and air pressure forms local, regional and global weather conditions. The course will include analysis of recent meteorological events that demonstrate basic principles of how weather patterns evolve. Three hours lecture per week. Three credit hours.

ERSC 3581 Oceanography I
Prerequisites: ERSC 1302/1102, CHEM 1402, 1403, MATH 1302. This introductory course in oceanography integrates chemical, geological, and physical oceanography to provide a multidisciplinary approach to the fundamentals of oceanography. Course offered through Gulf Coast Research Laboratory, Ocean Springs, Mississippi. Five credit hours.

ERSC 4190 Senior Seminar
Prerequisite: senior standing in earth science. Topics in philosophy of geology, environmental geology, or plate tectonics. May be repeated once if topics differ. One hour per week. One credit hour.

ERSC 4100, 4200, 4300 Independent Problems
Prerequisite: consent of instructor, generally given only with senior standing and/or 20 hours of geology. Field or laboratory problem in consultation with instructor. One, two, or three hours or equivalent per week. One, two, or three credit hours.

ERSC 4304 Geology of North America
Prerequisites: ERSC 1303/1103, 3360. Detailed history of North America and its life forms as interpreted from rock and fossil records. Principles of interpretation, geologic and biologic succession of events, and advanced individual interpretation of geologic maps, with reports. Two hours lecture, two hours laboratory (or equivalent) per week. Three credit hours.

ERSC 4313 Petrography
Prerequisites: ERSC 3312, four hours from ERSC 3311 or 3350. The microscopic study of igneous, sedimentary, and metamorphic rocks. Two hours lecture, two hours laboratory per week. Three credit hours.

ERSC 4321 Geomorphology
Prerequisites: ERSC 1302/1102, 2320, or consent of instructor. The study of the shaping of the earth's surface. The processes of weathering, mass movement, erosion, and deposition involved in the evolution of landforms; geomorphic cycles and regional physiography; applications to environmental studies. Laboratory includes analysis of maps, aerial photos, and field work. Dual-listed in the UALR Graduate Catalog as ERSC 5321. Two hours lecture, three hours laboratory or field study per week. Three credit hours.

ERSC 4322 Environmental Geology
Prerequisite: consent of instructor based on completion of ERSC 1302/1102, GEOG 1311, or the equivalent. Humans as a geologic agents, geologic hazards in the environment, geology and land use studies, urban geology, and case histories. Dual-listed in the UALR Graduate Catalog as ERSC 5322. Three hours lecture per week. Three credit hours.

ERSC 4332 Geology of Arkansas
Prerequisites: ERSC 1302/1102, consent of instructor. Regional geomorphology, structure, stratigraphy, and paleontology of Arkansas. Includes field trips to Ozark dome, Ouachita fold belt, Arkansas Valley, and Mississippi Embayment/Gulf Coastal Plain. Dual-listed in the UALR Graduate Catalog as ERSC 5323. Three hours lecture per week, weekend field trips. Three credit hours.

ERSC 4331 Geotectonics
Prerequisite: ERSC 3330. Continental crust, tectonic elements, and tectonics of North America; oceanic crust, tectonic elements, and the relationships of these to plate tectonics; anatomy of mountain belts. Dual-listed in the UALR Graduate Catalog as ERSC 5331. Three hours lecture per. Three credit hours.

ERSC 4351 Stratigraphy
Prerequisite: ERSC 3350. Stratigraphic principles and nomenclature, concepts of facies and correlation, stratigraphic mapping techniques, and regional stratigraphy. Three hours lecture per week. Three credit hours.

ERSC 4352 Stratigraphic Analysis
Prerequisite: ERSC 3350. Recognition of ancient sedimentary environments, analysis of facies, depositional systems, basin analysis, seismic stratigraphy. Three hours lecture per week. Three credit hours.

ERSC 4355 Coastal Marine Geology
Prerequisite: six hours of earth science. A study of inshore and near-shore geological processes, sedimentation patterns, and landform development. Course offered through Gulf Coast Research Laboratory, Ocean Springs, Mississippi. Three credit hours.

ERSC 4363 Paleoecology
Prerequisite: ERSC 3360. Reconstruction of ancient sedimentary environments based on fossil content. Will include study of general ecological principles, morphologic adaptation of organisms to their environments, and analysis of present and past community structures. Three hours lecture per week and a one week field trip. Three credit hours.

ERSC 4373 Hydrogeology
Prerequisites: MATH 1304 or 1311; ERSC 3330. Ground water occurrence, flow, porosity, permeability, aquifer analysis, geology of ground water, water well logging, well development, case histories, field methods, hydrogeologic planning. Dual-listed in the UALR Graduate Catalog as ERSC 5373. Three hours lecture per week. Three credit hours.

ERSC 4389 Undergraduate Research
Prerequisite: senior honors standing in geology. Various topics for thorough research selected by students in consultation with an advisor. Field work and/or experimental or laboratory work resulting in a report to be critiqued by at least two faculty members (no oral defense). The student is expected to spend at least nine hours per week on the project. 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. Three credit hours.

ERSC 4495, 4295, 4395 Internship in Earth Science
Prerequisites: senior standing in geology, consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry, and consulting firms. Forty hours supervised work per credit hour. One, two, or three credit hours.

ERSC 4421 Introduction to Geographic Information Systems
See BIOL 4421.

ERSC 4422 Applied GIS
Prerequisites: BIOL/ERSC 4421 or consent of instructor. This course builds on the fundamental concepts of Geographic Information Systems (GIS) from ERSC 4421 Introduction to GIS. It focuses on advanced applications in GIS with an emphasis on problem-solving, advanced analysis techniques, and database management. Two lecture hours per week, four laboratory hours. Four credit hours.

ERSC 4426 Introduction to Remote Sensing
Prerequisites: ERSC/BIOL 4421 or consent of instructor. This course introduces the fundamentals of manipulating and interpreting the electromagnetic spectrum. The lecture portion of the class covers concepts of remote sensing, including how data is collected, processed, analyzed, and interpreted. The lab portion of the class is focused on building proficiency in several images processing software programs and the use of spatial data for problem-solving in science. Two lecture hours per week, four laboratory hours. Four credit hours.

ERSC 4499, 4299, 4399, 4499 Special Topics
Prerequisite: consent of instructor. Advanced and specialized topics in the geological sciences, especially those of current interest. Refer to semester schedule for special topic offered. Credit will vary depending upon course topic. One, two, three, or four hours or equivalent per week. One, two, three, or four credit hours.

ERSC 4626 Field Geology
Prerequisites: ERSC 2320, 2310, 3330, and 3311 or 3350. Structural and stratigraphic mapping techniques, detailed mapping of igneous, sedimentary, and metamorphic terrains, air photo and map interpretation. Six weeks of field work and instruction. Six credit hours.
ETME 3323 Materials Handling and Plant Layout
Prerequisite: grade of C or greater in ETME 2317. Production, distribution and service systems, material flow and the role of material handling. Material handling principles, analysis techniques, and equipment planning. Plant layout and design. The course includes the use of various case studies and the application of computer methods. Three hours lecture. Three credit hours.

ETME 3324 Plastics and Composites
Prerequisite: CHEM 1402 or consent of the instructor. Introduction to plastics part design, materials, production methods, tooling, and equipment. Process cost analysis and optimization. Three hours lecture. Three credit hours.

ETME 3328 Computer Aided Manufacturing (CAM)
Prerequisites: grades of C or greater in ETME 2303, 2317. A study of the programming standards used in industry to control NC and CNC equipment. G and M codes, as well as specific control commands used in manual program. Computer aided design and manufacturing software to generate part geometry and tool path information. Preparation of final program used by the CNC controllers to machine the designed parts. Two hours lecture, three hours lab. Three credit hours.

ETME 3329 Process Planning
Prerequisites: grades of C or greater in ETME 2117, 2317. Analytical models and techniques as applied to manufacturing processing, cost estimating, tooling, and materials selection. Problems involving manufacturing, planning, and control. Two hours lecture, three hours lab. Three credit hours.

ETME 3330 Quality Control
Prerequisites: grades of C or greater in ETME 2117, 2317; MATH 1302. Statistical foundation for modern quality control. Process control techniques and applications. Product specifications and process capability. Planning and application of acceptance sampling including such plans as the Dodge-Roming, military standards 105 and 414. Computer application problems. Three hours lecture. Three credit hours.

ETME 3361 Cost Analysis and Estimation

ETME 4185 Robotics Laboratory
Prerequisite or corequisite: a grade of C or greater in ETME 4385. Robot set-up and programming using control pendant, programmable controllers, ARMBASIC and AML2 languages. Robot capabilities including positioning accuracy, repeatability, and compliance. Robot manufacturing tasks including sorting, machine loading, and assembly. Vision system and applications. One three-hour lab. One credit hour.

ETME 4187 Senior Project I
Prerequisite: senior standing. Product design/manufacturing cycle. The design process from market research through production and service. Concurrent engineering and design evaluation. Project selection and planning for the second phase of the senior project to be completed in ETME 4388. One hour lecture. One hour lab. One credit hour.

ETME 4199 Special Technical Topics I
Prerequisite: consent of instructor. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Meets equivalent of one hour. One credit hour.

ETME 4309 Production Control
Prerequisite: senior standing. Traditional operations research approach to production control and some of its limitations. Modern role of computer in material requirements planning (MRP). Master scheduling, capacity planning, dispatching, and shop floor control. Forecasting, order quantity planning, and inventory management, Just-In-Time production. Three hours lecture. Three credit hours.

ETME 4317 Machine Design
Prerequisite: ETME 3301. Basic procedures of engineering machine design from concept to specifications. Material selection, tolerances, variable loads and stress concentrations, combined stresses, shaft design, couplings, bearings, gears, power transmitting elements, brakes, clutches, and welded joints. Emphasis on a logical procedure for the design of a complete machine, its components, their functions and layout. Two hours lecture, three hours lab. Three credit hours.

ETME 4319 Plant Engineering
Prerequisite: ETME 3315 or consent of instructor. A practicum on the design and operation of mechanical systems for commercial and industrial applications. Thermal processes, waste water, ducts, piping, and other mechanical systems. Plant operation and maintenance. Two hours lecture. Two hours lab. Three credit hours.

ETME 4321 Computer Aided Engineering (CAE)
Prerequisites: ETME 2333, and ETME 3301, or consent of instructor. Advanced computer aided analysis, stress analysis, kinematics, computer simulation, advanced design software and applications, project documentation. Two hours lecture, two hours lab. Three credit hours.

ETME 4383 Method-Time Analysis
Prerequisites: grades of C or greater in ETME 2117, 2317; senior standing. Design of work methods; time study, performance rating, work sampling and introduction to predetermined and computerized time-data systems. Applications to incentive plans and measured day work. Participative productivity improvement such as gainssharing and quality circles. Two hours lecture, two hours lab. Three credit hours.

ETME 4384 Die Casting
Prerequisites: grades of C or greater in ETME 2317, 2302. Topics include heat flow, dimensional repeatability, metallurgy, molten metal systems, process control, cost estimating, operating the die casting machine, and safety. Two hours lecture, two hours lab. Three credit hours.

ETME 4385 Robotics and Automation
Prerequisites: ETME 3312; knowledge of computer programming or consent of instructor. Industrial robots, types, and method of control and programming. Automation and application to various industrial processes. Human factors considerations. Robot system planning and justification. Two hours lecture, two hours laboratory. Three credit hours.

ETME 4386 Maintenance Management
Planning, organization, measurement, and control of maintenance activities. The planning, acquisition, and control of replacement parts and maintenance of management information systems. Case studies and project work included. Three hours lecture. Three credit hours.

ETME 4387 Senior Project II
Prerequisites: ETME 3312, 4317, and 4187, or consent of instructor. Design problems obtained from industry, current applied research, or student's own initiative are researched in advance, and assigned as senior projects. Problems are defined, analyzed, design solved, and a final report presented. Final reports include design calculations, drawings, production plans, and may, depending on the scope of the project, be demonstrated and tested using a prototype. One hour lecture and three hours lab. Three credit hours.

ETME 4388 Manufacturing Systems Design
Prerequisites: a grade of C or greater in ETME 4170, senior standing. Manufacturing problems obtained from actual industrial situations are assigned to senior students. Each problem is analyzed, designed, and presented orally and in a formal written report by the student. Student reports include drawings, manufacturing plans, cost, and schedule and may be demonstrated by a prototype whenever possible. One hour lecture, three hours lab. Three credit hours.

ETME 4395 Technology Internship II
Prerequisites: junior standing in engineering technology, cumulative GPA of 2.50, minimum GPA of 2.30 for previous semester, approval of assignment by advisor. Professional experience related to student's discipline under supervision of advisor. At least 240 hours of work are required. Three credit hours.

ETME 4399 Special Technical Topics III
Prerequisite: consent of instructor based on relevance of subject to student career goals. Designed to meet special needs of students or industry to cover application of technology to specific industrial problems. Three credit hours.
Ethnic Studies (ESMP)

ESMP 4300 African-American and Ethnic Studies Seminar

The sociolinguistic development of black language usage. In-depth reading and analysis of the origins of black dialects, the lexical and syntactic development of Afro-typical words and phrases, so-called street talk, slang, and rapping. The main purpose of the course is to provide a historical and literary awareness of the multiplicity of language uses of people of African heritage in the United States. This course will be taught on a rotational basis by ethnic studies faculty members in their areas of specialization. Three credit hours.

Finance (FINC)

FINC 2300 Personal Finance
Personal financial planning, including bank deposits, savings accounts, life insurance, property and casualty insurance, retirement accounts, investment in stocks and bonds, housing. May not be taken for credit by business majors. Three credit hours.

FINC 3310 Business Finance
Prerequisites: ECON 2310, ECON 2322, ECON 2323, ACCT 2310, ACCT 2330. (May be taken concurrently with ECON 2323.) Business finance with emphasis on the modern corporation; methods of securing and managing assets; problems of bankruptcy, reorganizations; business combination. Three credit hours.

FINC 3330 Principles of Insurance
The phenomena of risk and risk bearing, including insurance and other methods of handling risks; introduction to the areas of property, marine, liability, disability, life insurance, and fidelity and surety bonding. Three credit hours.

FINC 3340 Financial Markets and Institutions
Examination and analysis of financial markets, such as savings institutions, banks, insurance companies, mutual funds, pension funds, and others. Three credit hours.

FINC 3350 Investment Analysis
Prerequisite: FINC 3310. Alternative investment opportunities, analysis of the economy, its industries, and particular businesses to determine the most desirable use of funds in terms of the objectives of individual and institutional investment programs. Three credit hours.

FINC 3370 Real Estate
Introduction to the real estate business; relationship of real estate to the national and local economies; legal instruments, appraisals, property sales, and management. Three credit hours.

FINC 4320 Bank Financial Management
Prerequisites: FINC 3310, 3340. Analysis and management of the asset and liability portfolio of depository financial institutions. Three credit hours.

FINC 4330 International Finance
Prerequisite: FINC 3310. Multinational corporate finance; practices and problems in international finance; balance of payments and exchange problems; recent developments and trends in international finance. Three credit hours.

FINC 4340 Life Insurance
Development of the human life value concept and financial consequences of economic death; types of insurers; types of life insurance and annuity contracts and their uses; premium and reserve calculations; introduction to programming for individuals, families, and institutions. Three credit hours.

FINC 4341 Commercial Property and Liability Insurance
Prerequisite: FINC 3310. Students will learn about commercial insurance coverage and how the business of insurance is conducted in practice. Topics covered include: underwriting, sales, marketing, claims adjustment, and pricing of insurance. Three credit hours.

FINC 4360 Risk Management
Introduction to the fundamentals of risk management. Scope and fundamentals of property and liability insurance; analysis of contracts, rating, underwriting, insurers, and loss adjustments and procedures. Three credit hours.

FINC 4363 Financing Entrepreneurial Ventures
Prerequisites: FINC 3310 and MGMT 3300. Financing alternatives for new and growing ventures; debt financing from investment banks, commercial banks, and SBIC, as well as equity financing from angel investors, private placements, venture capitalists, and public equity markets. Students use firm valuation methods and calculate return to investors to create a capital plan for a growing enterprise. Three credit hours.

FINC 4364 Employee Benefits
Analysis of the nature of health and social insurance; causes, extent, and economic consequences of old-age dependency, unemployment, and disability; hospitalization and medical insurance, surgical benefits, major medical coverage, disability income contracts; review of Social Security and related social insurance programs. Three credit hours.

FINC 4365 Business Insurance and Estate Planning
Importance of and techniques for risk identification and analysis as a basis for recognition of insurance requirements; application of coverages to business and personal needs. Three credit hours.

FINC 4366 Introduction to Actuarial Science
Prerequisite: FINC 4340. Introduction to the mathematics of insurance as the basis for rate making, reserve and cash value calculations, and underwriting; importance of correct actual practices to company solvency and liquidity. Three credit hours.

FINC 4368 Professional Financial Planning
Prerequisite: FINC 3310 and permission of instructor. Professional financial planning is the capstone course for the financial planning track in the Finance and Financial Services major. The course covers all the significant aspects of financial planning, including; gathering data and determining goals and constraints, analyzing current financial status, and developing and presenting a financial plan. The course will include case studies.
FINC 4371 Real Estate Finance and Investment
Prerequisite: FINC 3370. Elements of mortgage financing for housing and investment property; sources of funds; application and approval; real estate investment analysis; effects of financing and income taxation upon investment returns. A term project analyzing a proposed real estate investment is required. Three credit hours.

FINC 4372 Real Estate Valuation and Appraisal
Prerequisite: FINC 3370. Principles of valuation and appraisal of housing and investment property; market, replacement, and income approaches. A term project appraising an existing income property is required. Three credit hours.

FINC 4177,4277,4377 Independent Study in Real Estate
Prerequisites: consent of chairperson and instructor. Supervised independent study in a real estate area of particular interest to the student. No more than six credit hours of Independent Study in Real Estate may apply toward a degree. Credit to be determined at the beginning of the semester. One, two, or three credit hours.

FINC 4380 Portfolio Management
Prerequisites: FINC 3310, 3350. Investment risks, returns, and requirements; portfolio policies for the individual and institutional investor; functions of the stock exchange, investment bankers, and brokers. Three credit hours.

FINC 4383 Advanced Portfolio Management I
Prerequisite: FINC 3350 for undergraduate or FINC 7320 for graduate credit, and consent of department. Theories of portfolio construction, rules, fundamental analysis, and efficient markets hypothesis as applied to portfolio management; investment goals and strategies; decision making on portfolio of Ford Investment Trust. Students must apply to enroll in this course; check with the department for application forms and deadlines. Enrollment is limited to 15 students, no more than 5 of whom may be graduate students. Dual-listed in the UALR Graduate Catalog as FINC 5383. Three credit hours.

FINC 4395 Advanced Financial Management
Prerequisites: senior finance major, consent of chairperson and instructor. Sophisticated techniques of financial management. Application of the body of financial theory to specific problems. Three credit hours.

FINC 4396 Cooperative Education I
Prerequisites: senior standing, finance major, completion of at least 9 hours of upper level finance courses, cumulative GPA of 2.50, and consent of department chairperson prior to registration. Designed to complement and extend the classroom learning experience through the application of theories and concepts in a professional work environment. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities depend upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is accepted as elective credit in the finance major. Three credit hours.

FINC 4397 Seminar in Finance
Prerequisites: senior status and consent of faculty teaching course. Advanced finance topics offered in a modular format and usually team taught. Topics come from both the corporate and investments areas and may vary according to need. Three credit hours.

FINC 4399 Independent Study
Prerequisites: senior standing, consent of chairperson and instructor. Research and independent investigation in specific areas of finance of interest to the student. Three credit hours.

Fine Arts (FNAR)

FNAR 2300 Introduction to Fine Arts I
Prerequisite: RHET 1311. A course for students majoring in or with special interest in the arts. The first of two courses designed to give students competence in aesthetic experience through integrated studies in arts, music, and theatre/dance. Introduction to the arts and the creative process, how to write about the arts, and vocabulary and descriptive terms used in them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with FNAR 2301. Three credit hours.

FNAR 2301 Introduction to Fine Arts II
Prerequisite: FNAR 2300. Recommended: HIST 1311 or 1312. A course for students majoring in or with special interest in the arts. The second of two courses designed to give students competence in aesthetic experience through integrated studies in arts, music, and theatre/dance. Introduction to the history of the various
Foreign Languages (LANG)

LANG 0321 English as a Foreign Language
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

LANG 0322 English as a Foreign Language
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

LANG 0323 English as a Foreign Language
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

LANG 0324 English as a Foreign Language
A novice-level course for non-native speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading, writing, and grammar.

LANG 1111 Elementary Language Laboratory I
Corequisite: LANG 1311. Offered in a designated foreign language. Supervised laboratory practice in listening, speaking, and aural comprehension. One credit hour.

LANG 1112 Elementary Language Laboratory II
Corequisite: LANG 1312. Continuation of LANG 1111. One credit hour.

LANG 1210 Language for Travel and Business
Conversational skills in a designated foreign language for individuals interested in language primarily for travel and business. Will not substitute for any 1311, 1312, or 1315 language course. Two credit hours.

LANG 1212 Language for Travel and Business II
Continuation of LANG 1210. Will not substitute for any 1311, 1312, or 1315 language course. Two credit hours.

LANG 1311 Elementary Language I
Offered in a designated foreign language in response to student interest. A course for beginners with no knowledge of the specified language. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic reading ability. Three credit hours.

LANG 1312 Elementary Language II
Prerequisite: LANG 1311 in specified language or equivalent. Continuation of LANG 1311. Three credit hours.

LANG 1321, 1322 English as a Foreign Language
An elementary course for nonnative speakers of English. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic grammar and a limited reading ability. Three credit hours.

LANG 1323, 1324 English as a Foreign Language
Prerequisites: LANG 1321, 1322, or equivalent proficiency. Continuation of LANG 1321, 1322. Three credit hours.

LANG 1325, 1326 English as a Foreign Language
Prerequisites: LANG 1323, 1324, or equivalent proficiency. Continuation of LANG 1323, 1324. Three credit hours.

LANG 1327, 1328 English as a Foreign Language
Prerequisites: LANG 1325, 1326, or equivalent proficiency. Continuation of LANG 1325, 1326. Three credit hours.

LANG 1390, 1391, 2390, 2391, 3390, 3391, 3690, 3691, 3692, 3693 Language Study Abroad
Prerequisite: study of language of region visited. Offered for study abroad only. A language skills acquisition course often including a study of the culture and civilization of the region visited. Level of credit determined by student's placement abroad in a University-sanctioned program. Hours of credit determined prior to departure and based upon program content and duration.

LANG 2302 Foreign Language for Music Students
Study and practice of pronunciation of Italian, French, and German for music students; selections from opera, folk music, and standard vocal repertoire. Cannot be used to fulfill requirements in the department. Three credit hours.

LANG 2311 Intermediate Language I
Prerequisite: LANG 1312 in specified language or equivalent. A continuation of LANG 1312, the intermediate course leads to greater facility in the spoken language and to more advanced reading skills. Three credit hours.

LANG 2312 Intermediate Language II
Prerequisite: LANG 2311 in specified language or equivalent. Continuation of LANG 2311. Three credit hours.

LANG 2350 Foreign Language Study Trip
Prerequisite: appropriate LANG 1312 or consent of department chairperson. Offered with study abroad programs only. In addition to practical experience in language usage, students will undertake various projects requiring language use. Three credit hours.

LANG 4322 Teaching Second Languages
An overview of methods and materials used to teach skill development in modern second languages. Techniques considered most effective, and appropriate assessment strategies. Required for foreign language teacher certification and the ESL endorsement in the state of Arkansas. Dual-listed in the UALR Graduate Catalog as LANG 5322. Three credit hours.

LANG 4323 Second Language Acquisition
Prerequisite: junior standing. How second language is acquired by children and adults. A course for those preparing to teach students with limited English proficiency. Required for ESL endorsement in the state of Arkansas. Dual-listed in the UALR Graduate Catalog as LANG 5323. Three credit hours.

LANG 4324 Teaching People of Other Cultures
Prerequisite: junior standing. Cultural issues for teaching students with limited English proficiency. A required course for ESL endorsement in the state of Arkansas. Dual-listed in the UALR Graduate Catalog as LANG 5324. Three credit hours.

LANG 4325 Second Language Assessment
Prerequisite: junior standing. 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. Dual-listed in the UALR Graduate Catalog as LANG 5325. Three credit hours.

LANG 4350 Advanced Foreign Language Study Trip
Prerequisite: appropriate language at the junior level or consent of department chairperson (given for equivalent knowledge). Offered with study abroad programs only. In addition to gaining practical experience in language usage, students will choose and undertake a research project of their choice, requiring fluency. Three credit hours.
French (FREN)

FREN 1311 Elementary French I
A course for beginners with no knowledge of French. Instruction in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic grammar and a limited reading ability. Three credit hours.

FREN 1312 Elementary French II
Prerequisite: FREN 1311 or equivalent. Continuation of FREN 1311. Three credit hours.

FREN 1315 Conversational French
Prerequisite: FREN 1312 or consent of instructor. A performance course with emphasis on elementary conversation and discussion. For students with a basic knowledge of French grammar. Three credit hours.

FREN 2311 Intermediate French I
Prerequisite: FREN 1312 or equivalent. The intermediate course leads to greater facility in the spoken language and to more advanced reading skills. Three credit hours.

FREN 2315 Intermediate Conversational French
Prerequisite: FREN 2311. A performance course with emphasis on intermediate-level conversation and discussion. Three credit hours.

FREN 3115, 3116, 3117 Advanced Conversation
Special topics for discussion at an advanced level. Leads to expanded vocabulary mastery and greater fluency in the spoken idiom. May be taken one, two, or three hours per semester to a maximum of six hours.

FREN 3310 Integrated Skills I
Prerequisite: FREN 2312 or equivalent proficiency. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the presentational mode. Three credit hours.

FREN 3311 Integrated Skills II
Prerequisite: FREN 2312 or equivalent proficiency. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpersonal mode. Three credit hours.

FREN 3312 Integrated Skills III
Prerequisite: FREN 2312 or equivalent proficiency. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpretive mode. Three credit hours.

FREN 3316 French Pronunciation
Prerequisite: FREN 2311 or consent of instructor. The sounds and phonetic symbols of the French language with reference to phrasing, stress, rhythm, and intonation. Three credit hours.

FREN 3321 French Short Stories
Prerequisite: FREN 2312 or consent of instructor. Reading and criticism of short stories by outstanding authors. Three credit hours.

FREN 3332 Introduction to French Literature
Prerequisite: FREN 2312. History of the literature from the end of the seventeenth century to the present. Three credit hours.

FREN 3333 Selected Readings in French Literature
Prerequisite: 3000-level French course or consent of instructor. Reading and discussion of selected works from French literature. Three credit hours.

FREN 3334 French Culture and Civilization I
Prerequisite: FREN 2312 or equivalent (may be corequisite with consent of the instructor). Historical, sociological, and cultural background of the French people. Three credit hours.

FREN 3335 French Culture and Civilization II
Prerequisite: FREN 2312 or equivalent. A continuation of FREN 3334. Three credit hours.

FREN 3336 Francophone Cultures
Prerequisite: FREN 2311 or equivalent proficiency. History and culture of francophone communities outside of metropolitan France, including French overseas departments (Martinique, Guadeloupe), the Maghreb, West Africa, and North America (Québec, Louisiana).

FREN 4141, 4142, 4143 French Practicum
Prerequisite: FREN 3312 and two 3000-level French courses. Special problems in French syntax and stylistics. Offers students an opportunity to enrich and reinforce knowledge of syntax and stylistics for greater mastery in written communication. May be taken one hour per semester to a maximum of three hours.

FREN 4316 Advanced Listening and Pronunciation
Prerequisite: two 3000-level French courses. Advanced listening and pronunciation skills with reference to varieties of French spoken in the Francophone world. Three credit hours.

FREN 4331 Writings: Historical Perspective
Prerequisite: two 3000-level French courses. Reading and criticism of works of outstanding authors to the end of the 19th century. Three credit hours.

FREN 4341 Writings: Modern Perspective
Prerequisite: two 3000-level French courses. Reading and criticism of outstanding authors from the early 20th century to the present time. Three credit hours.

FREN 4350 Senior Project
Prerequisite: two 3000-level French courses. An independent project requiring research, oral presentation and written documentation under the guidance of French Faculty. Topic must be approved prior to registration. Three credit hours.

FREN 4351 French Cinema
Prerequisite: two 3000-level French courses. Viewing and discussion of French films including how French films both shape and reflect aspects of French cultural identity. Three credit hours.

FREN 4361, 4462 Seminar in French Literature
Prerequisite: two French literature courses or consent of instructor and two 3000-level French courses. Reading, discussion, and critical analysis of selected works from French literature. Three or two credit hours.

FREN 4101, 4201, 4301 Independent Study
Prerequisite: two 3000-level French courses and consent of instructor. Reading from a selected bibliography of French authors. Credit is determined at the beginning of the course according to the problem and will not be altered. One, two, or three credit hours.
Geography (GEOG)

GEOG 1310 World Economic Geography
An introductory survey of economic activities. Basic concepts of economic activity location are studied. A survey of economic geography of countries outside North America, with emphasis on the distribution of resources in these countries. Three credit hours.

GEOG 1311 Introduction to Physical Geography
Study of earth-sun relationships that produce the elements of weather, including temperature, precipitation, atmospheric pressure, and air circulation. Patterns of climate and their interrelationship with soil and vegetation systems. Study of major landform processes, which shape the earth’s surface, with specific reference to North America. Three credit hours.

GEOG 2310 World Regions
World regional patterns of population, natural resources, and economic activities with reference to the nature of regions and their characteristics. Regional patterns of Europe, North America, Latin America, Africa, and East and South Asia. Three credit hours.

GEOG 2312 Cultural Geography
Recommended: HETH 1311. The nature, distribution, and development of various cultural systems as they interact with each other and with their environment. A study is made of spatial patterns in the elements of culture, including population, religion, language, political ideology, economic activities, and settlement. Examination of the processes that have changed the natural landscape to a cultural landscape. Three credit hours.

GEOG 3305 Environmental Conservation
Survey of the human environment with respect to a wise management of natural resources. Examination of major resources and their use with reference to North America and to Arkansas. Recommended to early childhood education majors. Three credit hours.

GEOG 3315 Geography of Arkansas
Study of Arkansas’ natural and cultural environments with emphasis on how various groups, past and present, interact with the state’s natural regions. Geologic, climate, soil, and vegetation patterns are examined. Settlement patterns; economic activities, including agriculture, forestry, mining, and industry; and population distributions are analyzed and placed together with the state’s natural regions. Three credit hours.

GEOG 3320 Urban Geography
Study of the urban landscape and the specific land uses found in United States cities. Current geographic pattern of industrial, commercial, residential, public, and recreational activities in our cities with reference to Arkansas. Three credit hours.

GEOG 4321 Geomorphology
See ERSC 4321. Dual-listed in the UALR Graduate Catalog as GEOG 5321.

GEOG 4300 Special Topics
Prerequisites: consent of instructor, nine hours of geography or an associated discipline that complements the seminar topic. Topics will be chosen on the basis of contemporary interest and demand and will be focused to provide an in-depth understanding of the issue. Dual-listed in the UALR Graduate Catalog as GEOG 5300. Three credit hours.

GEOG 4332 Population Geography
Focus on global, national, and sub-national population processes, issues, and policies. Emphasis placed on the basic demographic components of fertility, mortality, and migration; on population structures; and on the factors which influence the demographic components and the population structures over time. Policy implications of the population processes and changes explored. Issued addressed from a spatial perspective. Dual-listed in the UALR Graduate Catalog as GEOG 5322. Three credit hours.

GEOG 4290, 4390 Independent Study
Prerequisites: 15 hours of geography including GEOG 1311, 2312, and consent of instructor. Research and reading in various areas of geography. Projects reflect student interest and career objectives along with departmental emphasis. Two or three credit hours.

GEOG 4397 Social Studies Teaching Applications
Social studies content linked with practical applications for classroom instruction. Content from history, geography, political science, sociology/anthropology, and psychology. Content modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. Critical components of each of the disciplines integrated into the content presentations and the demonstrated applications. Team taught. Three credit hours.

German (GERM)

GERM 1111 Elementary German Laboratory I
Corequisite: GERM 1311. Supervised laboratory practice in listening, speaking, and aural comprehension of German. One credit hour.

GERM 1112 Elementary German Laboratory II
Prerequisite: GERM 1311 or equivalent. Corequisite: GERM 1312. Continuation of GERM 1111. One credit hour.

GERM 1115, 1215, 1315 Conversational German
Prerequisite: GERM 1312 or consent of instructor. A performance course with emphasis on elementary conversation and discussion. For students with a basic knowledge of German grammar. One, two, or three credit hours.

GERM 1301 Reading German
Essential grammar for reading German, with minor emphasis on pronunciation. Will not substitute for any other course in German. Three credit hours.

GERM 1311 Elementary German I
A course for beginners with no knowledge of German. Instruction in correct pronunciation, aural comprehension, and simple speaking ability. Three credit hours.

GERM 1312 Elementary German II
Prerequisite: GERM 1311 or equivalent. Practice in correct pronunciation, aural comprehension, and simple speaking ability leading to active mastery of basic grammar and a limited reading ability. Three credit hours.

GERM 2111 Intermediate German Laboratory I
Corequisite: GERM 2111. Supervised laboratory practice in listening, speaking and aural comprehension of German at an intermediate level. One credit hour.

GERM 2112 Intermediate German Laboratory II
Corequisite: GERM 2312. Continuation of GERM 2111. One credit hour.

GERM 2311 Intermediate German I
Prerequisite: GERM 1312 or equivalent. The intermediate course leads to greater facility in the spoken language and to more advanced reading skills. Three credit hours.

GERM 2312 Intermediate German II
Prerequisite: GERM 2311 or equivalent. Continuation of GERM 2311. Three credit hours.

GERM 2315 Intermediate German Conversation
Prerequisites: GERM 2311, 2312 or instructor’s consent. A course to practice oral skills on a wide range of topics. Students will learn how to narrate, describe, compare, and comment. Three credit hours.

GERM 2337 German Literature in Translation
The study and reading of representative works (in English) of German prose, poetry, and drama. Will not apply toward a major or minor in German. Three credit hours.

GERM 3115, 3116, 3117 Advanced German Conversation
Prerequisite: GERM 2315 or higher or consent of instructor. A course leading to greater fluency in oral skills. Students work toward oral proficiency through discussions on specialized topics.

GERM 3311 Advanced Composition and Conversation
Prerequisite: GERM 3312 or equivalent. Review of basic grammar and practice of oral and written skills. Three credit hours.

GERM 3312 Advanced Composition and Syntax
Prerequisite: GERM 2312 or equivalent. GERM 3311 is recommended. Grammar and syntax toward mastery of reading, writing, and speaking skills. Three credit hours.

GERM 3316 German Phonetics
Prerequisite: 2000-level German course. The sounds and phonetic symbols of the German language with reference to its history. Three credit hours.

GERM 3321 German Short Stories
Prerequisite: GERM 3312 or consent of instructor. Reading and criticism of short stories by outstanding authors. Three credit hours.

GERM 3332 Introduction to German Literature
Prerequisite: GERM 3312 or equivalent. An introduction to German literature and brief history of the literature from the age of Goethe to the present. Three credit hours.

GERM 3333 Selected Readings in German Literature
Prerequisite: 3000-level German course or consent of instructor. Reading and discussion of selected works from German literature. Three credit hours.

GERM 3334 German Culture and Civilization
Prerequisite: GERM 2312 or the equivalent. Background studies for German literature. The social, intellectual, and cultural history of German-speaking countries as it applies to the study and teaching of German language and literature. Three credit hours.

GERM 4101, 4201, 4301 Independent Study
Prerequisite: consent of instructor. Reading from a selected bibliography of works in the field of Germanic languages and literature. Credit is determined at the beginning of the course according to the problem and will not be altered. One, two, or three credit hours.
GERM 4151, 4152, 4153 Senior Research Project
Prerequisite: senior standing. An independent research project completed over two semesters under guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4151), a formal paper (4152), and an oral presentation (4153), each providing one hour of academic credit. A student may enroll in 4152 and 4153 only after completing 4151. Required for German studies majors. Three credit hours.

GERM 4161, 4261, 4361 Seminar: Special Topics
Prerequisite: six hours of upper-level German or consent of instructor. Reading, discussion, and critical analysis of selected materials from German speaking regions. Course content will change on demand. May be repeated for a maximum of six hours if topic changes.

Gerontology (GERO)

GERO 2300 Introduction to Aging and the Elderly
Prerequisites: RHET 1311 and 1312 or equivalents. SOCI 2300 or PSYC 2300 recommended. An overview of the aged as they relate to their social environment, with emphasis on the biological, psychological, and sociological aspects of aging. Three credit hours.

GERO 4315 Interdisciplinary Health Care of the Elderly
Designed to increase clinical knowledge, skills, and attitudes of students in the health professions and other fields related to health promotion and maintenance for the elderly. In-depth exploration of the multiple factors associated with the physiological process of aging, psychosocial developmental tasks, and typical environments of aged persons. Dual-listed in the UALR Graduate Catalog as GERO 5315. Three credit hours.

GERO 4336 The Social Aspects of Death and Dying
An exploration of the subject of dying and death in contemporary society. Emphasis is on the psychological and social correlates of death. The dynamics of the grief process and issues of ethics of life support are explored. Dual-listed in the UALR Graduate Catalog as GERO 5336. Three credit hours.

GERO 4346 Family in Late Life
Prerequisite: GERO 2300. Family life of the elderly, including late-life marital relationships; widowhood and living alone; relations with children, grandchildren, siblings, and other kin; alternative and innovative lifestyles; family neglect and abuse of the elderly; and demographic and structural changes in the family and society that affect these matters. Exploration of dynamic and therapeutic models of family problems and process to provide a foundation of concepts for later training in counseling families with elderly members. The family as a natural support system for the elderly, along with the potential and limitations of such a system in a context of community support networks, will be core concepts. Dual-listed in the UALR Graduate Catalog as GERO 5346. Three credit hours.

GERO 4385 Topics Seminar
Prerequisite: consent of instructor. Special topics of critical and current interest to those interested and involved in the aging field. Topics range from Social Security, legislation affecting the elderly, and targeted programs to clinical and research developments in aging and life-span developmental issues. May be taken more than once under different topics. Dual-listed in the UALR Graduate Catalog as GERO 5385. Three credit hours.

GERO 4190, 4290, 4390 Directed Study
Prerequisites: junior or senior standing; GERO 2300 or consent of instructor. Study directed by a faculty member in a content area or competency relevant to research on aging or practical matters in connection with the elderly. May include field placement at an agency working with or for the elderly. Forty-five clock hours of study or of work on-site (in field placements) per credit hour is presumed. One, two, or three credit hours.
Gender Studies (GNST)

GNST 2300 Introduction to Gender Studies
Recommended prerequisite: RHET 1311. A cross-cultural, interdisciplinary analysis of gender. Includes examination of gender identity, social roles, and cultural symbolism in politics, economics, family, health, socialization, religion, and language. Three credit hours.

GNST 3315 Gender Communication
[See course description for SPCH 3315 Gender Communication]

GNST 3318 Sexuality, Society, and Culture
[See course description for ANTH 3318 Sexuality, Society, and Culture]

GNST 3333 Women in a Changing Society
[See course description for SOCI 3333 Women in a Changing Society]

GNST 3340 Women in Literature
[See course description for ENGL 3340 Women in Literature]

GNST 3346 Sociology of the Family
[See course description for SOCI 3346 Sociology of the Family]

GNST 3350 Family Violence
[See course description for SOCI 3350 Family Violence]

GNST 3366 Psychology of Women
[See course description for PSYC 3366 Psychology of Women]

GNST 3388 Kinship and Descent
[See course description for ANTH 3388 Kinship and Descent]

GNST 4300 Gender Studies Senior Seminar
Prerequisite: GNST 2300. Taught on a rotating basis by gender studies faculty members in the member’s area of specialization. Three credit hours.

GNST 4371 Women in World History
[See course description for HIST 4371 Women in World History]

GNST 4372 Perspectives on Women in American History
[See course description for HIST 4372 Perspectives on Women in American History]

GNST 4190, 4290, 4390 Independent Study
Prerequisites: 15 hours of gender studies courses including GNST 2300 or consent of instructor. Selective reading and formal written project on a topic must be submitted by the student and approved by the coordinator before registration. Credit is determined at the beginning of the semester. One, two, or three credit hours.

GNST 4195, 4295, 4395 Internship
Prerequisites: 15 hours of gender studies courses including GNST 2300 or consent of director. Students are assigned an internship in the community. The objective is for students to apply theoretical perspectives to real-world situations. Credit is determined at the beginning of the semester. Each hour of credit requires at least 30 hours of supervised work during the semester. One, two, or three credit hours.

History (HIST)

HIST 1311 History of Civilization I
Recommended prerequisite: RHET 1311. The history of the world’s significant civilizations from their beginnings to approximately AD 1600: the development of integrated political, social, economic, religious, intellectual, and artistic traditions and institutions within each of those cultures; significant intercultural exchanges. Three credit hours.

HIST 1312 History of Civilization II
Recommended prerequisite: RHET 1311. The history of the world’s significant civilizations since approximately AD 1600: examination of the persistence of traditional civilizations and the changes in the world order due to the development of modern industrial society, modern science, and the nation state. Three credit hours.

HIST 2311 U.S. History to 1877
Description, analysis, and explanation of the major political, social, economic and diplomatic events through “Reconstruction.” Special attention is devoted to the cross-cultural development of three civilizations, Native American, European, and African, within the geographical context of the North American continent. Major topics for study include European colonial empires; the American Revolution; the Constitution of 1787; evolution of a national government, federal in system and republican in form; social and economic theories and practices; relationship with foreign governments; and the American Civil War. Three credit hours.

HIST 2312 U.S. History since 1877
Description, analysis, and explanation of the political, social, economic and diplomatic events to the present time. Special attention is devoted to the forces of Modernity and the impact of cultural pluralism on traditional institutions. Major topics for study include industrialization; agrarianism; labor; immigration; reform movements; total and limited war; economic theory and practice; and the U.S.’s role in world affairs. Three credit hours.

HIST 3301 Ancient History and Thought
Social, intellectual, and cultural history of ancient Mesopotamian, Egyptian, Greek, and Roman peoples. Three credit hours.

HIST 3302 History of Ancient Greece
A political, constitutional, and social history of Greece from the Homeric Age to the fall of the Athenian Empire in 404 BC. Three credit hours.

HIST 3303 The Hellenistic Age
The study of Greek civilization from the fall of the Athenian Empire (404 BC) through the reign of Alexander the Great to the collapse of his successors’ kingdoms before the advance of Rome (c. 146 BC). Three credit hours.

HIST 3304 History of the Roman Republic
The history of the expansion of the city of Rome from a small village on the banks of the Tiber to a world empire. Three credit hours.

HIST 3305 The History of the Roman Empire
A history of the Roman Empire from the reign of Augustus and the rise of Christianity to the end of antiquity. Three credit hours.

HIST 3310 Age of Charlemagne
The social, economic, and cultural history of Europe in the eighth and ninth centuries. Considerable time will be devoted to a study of daily life in the Frankish kingdom, and special attention will also be given to a structural analysis of Frankish institutions and the interaction of these institutions with neighboring cultures. Three credit hours.

HIST 3311 Medieval Origins
A study of the breakdown of classical society and the new beginnings of European civilizations (c. AD 300-1000). Three credit hours.

HIST 3312 History of Medieval Civilization
A study of the interaction of the social class structure and Christianity in forming the institutions of medieval civilization (c. AD 1000-1350). Three credit hours.

HIST 3313 The Renaissance, 1300-1550
A study of urban and court life at the time of the Renaissance. Examines such themes as humanism, the arts, discovery, and gender issues in Italy and northern Europe. Three credit hours.

HIST 3315 Early Modern Europe, 1600-1815
Survey of major developments from the Thirty Years’ War through the French Revolution. Examines the role of international conflict, national state building, commercialization, the scientific revolution, and the enlightenment in the formation and disintegration of the Old Regime. Three credit hours.

HIST 3316 Europe and Revolution 1789–1914
Survey of European history from the French Revolution to the outbreak of the First World War. Emphasis on revolutionary movements, nationalism, industrialization, class society, and imperialism. Three credit hours.

HIST 3317 Twentieth-Century Europe
World War I and its consequences; depression; totalitarianism; World War II; the reconstruction of Europe; the Cold War. Three credit hours.

HIST 3321 History of Britain to 1688
The period from the earliest times to the Glorious Revolution. Three credit hours.

HIST 3322 History of Britain since 1688
The period from the Glorious Revolution to the present. Three credit hours.
HIST 3323 British Empire
The political, social, and economic development of the British Empire, the foundations of the Commonwealth, and the emergence of the dominions and the dependent empire as autonomous units with the Commonwealth. Three credit hours.

HIST 3325 History of Russia to 1917
History of Russia from prehistoric origins through Kievian, Muscovite, and Tsarist periods with consideration of political, intellectual, economic, and religious factors. Emphasis on Tsarist policies. Three credit hours.

HIST 3326 The Soviet Union and Russia since 1917
Survey of major social, political, and cultural developments including the Russian Revolution, Stalinism, the Cold War, everyday life, the collapse of the Soviet Union, and the post-Soviet era. Three credit hours.

HIST 3328 Modern France
The French political community from the Old Regime to the Fifth Republic, with emphasis on the interrelationship of politics, class, and culture. Three credit hours.

HIST 3330 Early Modern Germany 1495–1806
Survey of the major social, political, and cultural developments in Germany from the Reformation to the French Revolution. Topics include political fragmentation and intra-German conflict, religious conflict, absolutism, the Enlightenment, the collapse of the Holy Roman Empire as well as everyday life, art, and literature. Three credit hours.

HIST 3331 Modern Germany since 1806
German history from the French Revolution to Re-Unification. Topics include nationalism and unification, revolutionary movements, industrialization and class society, Nazism and the Holocaust, post-war division, democratization and Europeanization, reunification, and the shifting nature of German identity. Three credit hours.

HIST 3334 Imperial Spain in the Golden Age, 1400–1700
A study of the development of the Spanish Empire, 1400–1700, examining such topics and themes as the interaction and exchange between Muslim, Jewish, and Christian cultures; the impact of Spanish expansion into the Americas; and the cultural legacy of Spain’s “Golden Age.” Three credit hours.

HIST 3336 Islam and the Modern Middle East
An examination of the role of Islam as the primary cohesive element in the social, political, and cultural development of the modern Middle East. Comparison and contrast of Western and Middle Eastern perspectives on relevant current issues. Same as RELS 3336. Three credit hours.

HIST 3341 East Asia Foundations: Culture & History to 1600
Development of the political, economic, social, and intellectual patterns within the East Asian cultural sphere from prehistory to the sixteenth century, with an emphasis on China and Japan. Three credit hours.

HIST 3342 History of Modern China
Reaction to contacts with Western civilization; continuity, modernization, and revolution from the nineteenth century to the present. Three credit hours.

HIST 3345 People’s Republic of China
The history of the origins of the Chinese Communist Party and of the development of China under Communist rule. Three credit hours.

HIST 3347 History of Japan
Development of the political, social, economic, and intellectual patterns of Japanese life from prehistory to the present. Three credit hours.

HIST 3351 Colonial America, 1607–1763
English settlements in the New World, the development of colonial society, American colonies, the British Empire. Three credit hours.

HIST 3352 American Revolution, 1763–1787
Colonial society in 1763. British imperial policy and the American response, the war for independence, effects of the Revolution on American ideas and institutions. Three credit hours.

HIST 3353 The New Republic: The US, 1787–1848
The formation of the Constitution, the emergence of American political institutions, economic and social development, and nationalism. Three credit hours.

HIST 3355 American Civil War and Reconstruction, 1848–1876
The origins of the American Civil War, its course, and subsequent efforts at reconciling North and South. Emphasis on the social, economic, and cultural background to the war and its impact on American society. Three credit hours.

HIST 3356 The Gilded Age: The US, 1876–1900
United States history from the end of Reconstruction through the presidential administration of William McKinley. The course emphasizes the changing character of America in this era, including the farmers’ revolt, industrialization, foreign affairs, and major social trends. Three credit hours.

HIST 3357 The Age of Reform: The US, 1900–1939
The political, economic, social, and diplomatic development of the United States between 1900 and 1939. Three credit hours.

HIST 3358 Recent America: The US, 1939–present
A history of the American people in recent times, including economic, social, and cultural developments as well as political, diplomatic, and military events. Three credit hours.

HIST 3371 History of Latin America: Colonial Period
Indian culture. Colonial European discovery, conquest, and colonial development; the Spanish colonial regime in the New World from 1492 to 1820; and wars of independence. Three credit hours.

HIST 3372 History of Latin America: Republican Period
Formation of the Latin American countries stressing political, economic, social, and cultural factors as well as the role of Latin America in world affairs. Three credit hours.

HIST 3375 Modern Mexican History
A study of political, social, and economic developments in Mexico since 1870. Industrialization, nationalism, foreign intervention, and multinational corporations as they relate to Mexican development and the 1910 Mexican Revolution. Three credit hours.

HIST 3380 The Indian in American History
A survey of red-white relations from first contacts through the creation of a reservation system in the 1800s and the removal of the Indians. Three credit hours.

HIST 3401 History of Technology
A survey of the role of technology from the Stone Age to the nuclear age. Three credit hours.

HIST 3402 Magic, Science, and the Occult from Antiquity to Newton
A survey of human’s attempts to explain and control the cosmos from antiquity to the emergence of modern science around 1700, including the contributions of pseudo-scientific, occult, and magical world-views; internal developments in the history of science; and the relationship between scientific thought and the historical context. Three credit hours.

HIST 3405 Environmental History
Study of humanity’s interrelationship with the natural environment throughout history, with emphasis on historical factors relating to current environmental problems. Three credit hours.

HIST 4315 Religious History of the United States
Examines the religious history of the United States from the founding of the nation to the present. Emphasis on the role of religion in politics, culture, and society. Three credit hours.

HIST 4316 Medicine, Miracles, and Magic: Early History of Healing in Medieval and Renaissance Europe
A holistic examination of various ways in which Europeans sought to cure disease in pre-modern times. Magic, folk cures, and miracles, as well as the works 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. Dual-listed in the UALR Graduate Catalog as HIST 5316. Three credit hours.

HIST 4317 Early Modern War
The social, economic, and cultural history of warfare in the middle ages (c. AD 400–1500) with emphasis on the Crusades, the Spanish Reconquesta, and martial activities in such marcher regions as the Celtic fringe, Transdunabia, and Baltic Europe. Some attention will be given to the often neglected subject of medieval maritime warfare. Also, the course will deal with juridical, ethical, and religious aspects of war in the Middle Ages. Three credit hours.

HIST 4318 Medicine, Miracles, and Magic: Early History of Healing in Medieval and Renaissance Europe
A holistic examination of various ways in which Europeans sought to cure disease in pre-modern times. Magic, folk cures, and miracles, as well as the works 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. Dual-listed in the UALR Graduate Catalog as HIST 5317. Three credit hours.

HIST 4319 Apocalypse Now and Then: A History of Apocalyptic Thought and Movements
This course offers a history of beliefs about the end of the world in the western Judeo-Christian tradition. Through lectures and readings, we will examine such topics as the history of apocalyptic thought, the medieval development of various aspects of traditions about the End (such as the figure of Antichrist and millenarian traditions), millenial influences on the discovery and colonization of the New World, millennal 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 the flexibility of apocalyptic language, its ability to interpret various historical situations, and its power to move people to acceptance or action. Dual-listed in the UALR Graduate Catalog as HIST 5319. Three credit hours.

HIST 4321 A History of the Future: Millennial Visions in Film and Literature
Examines past moments in which people take stock of the present by gazing into the future. Through literature and film, studies predictions of the future in their historical contexts. Looks at positive and negative views of the future, secular and religious predictions for humans’ fate. Dual-listed in Graduate Catalog as HIST 5321. Three credit hours.

HIST 4325 Religious History of the United States
Development of Protestantism including evangelicalism, new denominations, and fundamentalism; incorporation of Catholicism and Judaism into main stream; 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. Dual-listed in the UALR Graduate Catalog as HIST 5325. Three credit hours.
HIST 4316 Ideology and Revolution in Eighteenth-Century Europe  
The late eighteenth-century age of revolution and its background. The crisis of the Old Regime; the contributions of Jansenism, the Enlightenment, constitutions, the principles of gender and of a revolutionary ideology; the course of revolution during the last decade of the eighteenth century. Emphasis on France, but some attention to Britain, Germany, Italy, and America. Three credit hours.

HIST 4318 Modern Revolutions: From France to China  
A comparative examination of five modern revolutions: the French Revolution (1789-1815), The Meiji “Restoration” in Japan (1853-1890), the Mexican Revolution (1910-1920), the Russian Revolution (1917-1932), and the Chinese Revolution (1919-1949). We will consider such issues as the extent of real turnover in the state apparatus, the role 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. Dual-listed in the UALR Graduate Catalog as HIST 5318. Three credit hours.

HIST 4319 Military History of the Western World  
A survey of military developments from the time of the Greeks until the end of World War II. The course investigates how internal institutions, international goals, organizational skills, leadership, and the application of technology by nations have affected the evolution of warfare in the West. These factors are examined to help students understand the nature of Western military systems and how they have been used as instruments of national policy. Three credit hours.

HIST 4323 History of Canada  
The exploration, settlement, and development of Canada, emphasizing the periods of European domination, the emergence of Canadian nationalism, and Canada’s relations with the United States. Three credit hours.

HIST 4333 European Social and Cultural History  
Interdisciplinary survey of major European social and cultural developments from the Enlightenment to the present. Explores the interrelationship between a changing society and its beliefs; examines the political impact of modern ideologies, the sciences, and the arts. Three credit hours.

HIST 4338 Holocaust  
The Holocaust as both a German and international event. Major topics include the tradition of anti-Semitism, the politics of immigration, the planning and execution of the Final Solution, Jewish and non-Jewish resistance, the complicity of non-Germans, the role of the Allied powers, and the settling of accounts at Nuremberg. Three credit hours.

HIST 4341 History of Chinese Philosophy  
The major philosophies of China from ancient to modern times. Three credit hours.

HIST 4345 Chinese Film and History  
This course looks at the dramatic 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. Dual-listed in Graduate Catalog as HIST 5345. Three credit hours.

HIST 4352 The American West: Trans-Mississippi  
A study of the westward expansion of the United States; United States penetration into the Trans-Mississippi River West after the Lewis and Clark expedition; social, political, and economic development; culture of the indigenous Indians of the northern and southern plains. Three credit hours.

HIST 4353 The Old South  
The development of southern institutions and ideas from the colonial period through the Civil War. Three credit hours.

HIST 4354 The New South  
Continuity and change within the southern states from Reconstruction to the present. Three credit hours.

HIST 4355 History of Arkansas  
Physiographic and demographic patterns; exploration, settlement, and political, social, and economic evolution of Arkansas from the Spanish and French excursions to the present. Also, a study of contemporary policies and government in Arkansas. Three credit hours.

HIST 4359 American Urban History  
Beginnings and growth of urbanization in America from colonial times to the present. Emphasis on the economic base of urban expansion; development of urban policies, services, and municipal administration; the image of the city in popular thought; the impact of industrialization, transportation, population, and the frontier on urbanization. Three credit hours.

HIST 4363 Law in American History  
The development of legal institutions in America from their English origins to the present. The rule of law, legal thought and the legal profession, the independent judiciary, civil rights, and the law’s role in economic development. Three credit hours.

HIST 4364 History of American Enterprise  
The development of business enterprise in America from its roots in English colonialism through the advent of industrialism; the growth of commerce, the geopolitical foundations of a national marketplace, and the dawn of the corporate age; the relationship between property and the state, social values and the profit motive, innovation and economic advance. Three credit hours.

HIST 4365 Modern U.S. Culture  
An examination of the historical development of mass culture in modern America. Concentration on the historical dimensions of culture and the ways in which automobiles reflected their values in response to technological and social change. It will explore the impact of various mechanisms through which a mass culture emerged, including movies, magazines, radio, and television. Considers the relationship between culture and national character as currently debated by leading historians. Three credit hours.

HIST 4367 American Labor History  
A study of American labor history from colonial times to the present; indentured servitude, slavery, sea-going and free labor, the impact of immigration and the introduction of the factory system, patterns of organization, mass production indexed, automation, and the emergence of subsequent problems of the modern labor movement. Three credit hours.

HIST 4368 Black History to 1865  
Lectures, selected readings, and discussion on phases of black development in America. Three credit hours.

HIST 4369 Black History Since 1865  
A comprehensive study of the socioeconomic, cultural, and political development of African-Americans from the end of the Civil War to the present. Three credit hours.

HIST 4371 Women in World History  
An examination of the conditions of women in history with emphasis on problems in European history; attitudes toward women as reflected in religious, legal, and philosophical literature; and the role expectations of women in various societies. Three credit hours.

HIST 4372 Perspectives on Women in American History  
Consideration of conditions and problems of women in American history from colonial to modern times with reference to European background and parallels where appropriate. Three credit hours.

HIST 4373 History of Family and Childhood in Modern Europe  
The course introduces students to the history of childhood and family life in nineteenth and twentieth century Europe. Three credit hours.

HIST 4378 The History of U.S.-Latin American Relations  
Survey of U.S.-Latin American relations from the pre-Columbian period to the present with emphasis on the nineteenth and early twentieth centuries. Focus on the diplomatic and economic relationships, including dollar diplomacy, intervention, dictatorship, and revolution. Three credit hours.

HIST 4385 U.S. Diplomatic History  
The origins, character, and consequences of United States foreign policy before the twentieth century, emphasizing the initial growth of the United States to world power. Three credit hours.

HIST 4387 Great Decisions in American Foreign Policy  
See POLS 4387.

HIST 4390 Special Topics in History  
Specialized study of selected topics in history. Course content changes each semester; refer to the semester class directory. Three credit hours.

HIST 4391 Seminar in United States History  
Prerequisites: HIST 2311, 2312, six hours of upper-level United States history. Advanced study of a topic in United States history chosen by instructor; includes a major research and writing project incorporating the department’s goals of identifying a problem; establishing a thesis; gathering, evaluating, and analyzing evidence; and writing in an appropriate scholarly format. Three credit hours.

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

HIST 4395 History Internship  
Prerequisites: junior or senior standing, 15 credit hours of history. This course involves field experience with a history-related business or public agency. The student will work under the supervision of an individual at the internship agency and a member of the history faculty. The student must secure permission from both supervisors before registration. Three credit hours.

HIST 4396 Seminar in Arkansas History  
Prerequisite: consent of instructor. Discussion, directed readings, research, and writing on selected issues. Topics will vary. May be repeated as topics vary for up to six credit hours. 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, is required. Three credit hours.

HIST 4397 Teaching Applications  
The course links social studies content with practical applications for classroom instruction. The content information comes from history, geography, political science, sociology/anthropology, and psychology. This content is modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. The critical components of each of the disciplines will be integrated into the content presentations and the demonstrated applications. This course will be team taught. Same as GEOG 4397 and POLS 4397. Three credit hours.
**HIST 4199, 4299, 4399 Independent Study**
Prerequisites: senior standing, 15 credit hours of history. Open to history majors only. For students of superior ability who seek special research in the field. One, two, or three credit hours.

**Oral History (OHIS)**

**OHIS 3110, 3210, 3310 Oral History Research**
Prerequisite: consent of program coordinator. An individual research project planned with the advice of the program coordinator and other appropriate persons. May be taken for one, two, or three hours credit, depending on the size and complexity of the project.
HSCI 1101 Dieting and Weight Control
A practical short course designed to teach the proper methods of dieting and controlling body weight. Students will be taught how to determine, achieve, and maintain their correct body mass by using the scientific principles of nutrition, exercise, and the utility of using drugs and fad diets to control weight will be explained. One credit hour.

HSCI 1102 Substance Abuse and Addiction
A practical short course designed to provide basic knowledge of drug abuse and addiction. Students will evaluate the role of drugs and other addictive behaviors in their life, and identify their risk factors for abuse or dependence. Students will be given information on available resources and options for behavior change and coping skills. One hour lecture/discussion per week. One credit hour.

HSCI 1103 Smoking Cessation
A practical short course designed to explore nicotine dependency/addiction and smoking cessation options. Based on assessment of individual tobacco use and knowledge of the advantages and disadvantages of smoking cessation options, students will plan and implement, if appropriate, a strategy for long term smoking cessation. One hour lecture/discussion per week. One credit hour.

HSCI 1104 Stress Management
A practical short course designed to assist the individual in identifying sources and situations that trigger reactions, both positive and negative, that display the physiological stress response. The individual will be taught how to identify stressors in their lives and explore possible ways of changing responses in order to develop satisfactory reactions to these stressors. The approach to this course is both personal and practical. One hour lecture/discussion. One credit hour.

HSCI 1170 Cardiopulmonary Respiration
Current lifesaving techniques used on individuals with heart or breathing emergencies. Appropriate first aid techniques also included. Two hours lecture/laboratory. One credit hour.

HSCI 1370 Personal Health
Designed to develop the understanding, attitudes, and practices which contribute to optimum physical, mental, and social well-being. Emphasis on major health problems and causes of death in various age groups. Three hours lecture per week. Three credit hours.

HSCI 2302 Exercise, Wellness, and Lifestyle
Recommended prerequisite: BIOL 1401 or 1413. Designed to equip students with the information, opportunities, and strategies needed to improve their physical fitness, from nutrition and weight control to cardiovascular endurance. Practical applications of current theory in nutrition and exercise physiology that students can apply to their own personal plan. All students will be given a fitness evaluation at the beginning and at the end of the semester with interim testing, training, demonstrations, and technique development. Two hours lecture, two hours laboratory per week. Three credit hours.

HSCI 2372 Care and Prevention of Injuries
Care, prevention, and treatment of injuries to various parts of the body; taping and wrapping; laboratory practical activities; exercise therapy techniques and basic understanding necessary to sound exercise programs. Three hours lecture/laboratory per week. Three credit hours.

HSCI 2401 Nutrition
Prerequisites: CHEM 1400, 1401 or their equivalents. Fundamental principles of human nutrition, nutritional value of foods, nutritional requirements of individuals at all ages, application of principles of nutrition under various physiological and economic conditions. Four hours lecture/demonstration per week. Four credit hours.

HSCI 3195 Practicum in Health Education
Prerequisites: junior standing, consent of program coordinator. Directed observation and supervised field work in a health education professional setting. Emphasis on planning, conducting, and evaluating activities in the program. One credit hour for 30 clock hours. One credit hour.

HSCI 3196 Practicum in Exercise Science
Prerequisites: HSCI 2302, consent of program coordinator and instructor of HSCI 2302. Practicum students will administer physical fitness tests to those enrolled in HSCI 2302 at both the beginning and end of the semester. They will help prescribe exercise and be responsible for helping HSCI 2302 class members achieve their stated fitness goals. This aid will consist of advice and motivation, leadership of exercise groups, nutrition planning, and modification of exercise prescriptions where required. One credit hour for 30 clock hours. One credit hour.

HSCI 3210 Teaching Individual Sports
The course is an examination of the theory and practice of teaching and coaching: tennis and golf. Two hours lecture per week. Two credit hours.

HSCI 3211 Health and Safety in Early Childhood
A practical short course designed to provide an introductory exposure to the basic concepts of health and safety in early childhood environments. Specific attention is given to recognition of common illnesses in young children, including control practices, in jury prevention, and basic emergency treatment procedures. Some of the regulations that guide health and safety practices in early educational environments will be examined. Two hours lecture per week. Two credit hours.

HSCI 3220 Teaching Team Sports
The course is an examination of the theory and practice of teaching and coaching: basketball, volleyball, and baseball. Two hours lecture per week. Two credit hours.

HSCI 3302 Exercise Physiology
Prerequisites: BIOL 1411, 1412 or their equivalents, or consent of instructor. The relationship between regular, moderate exercise and the resultant increase in the efficiency of the heart, lungs, and skeletal muscles. Students learn to assess fitness by the use of various laboratory instruments and techniques and to improve fitness by the judicious use of specific training programs. Two hours lecture, two hours laboratory. Three credit hours.

HSCI 3310 Coaching Theory and Methodology
Course is designed to improve the knowledge and understanding of methods and coaching theories. Students learn how to manage young athletes in conditioning, skill development, competition, motivation, and strategies. Three hours lecture per week. Three credit hours.

HSCI 3320 History of Physical Education
A study of the historical development of organized physical activity designed to improve the understanding and appreciation of the purpose, value, nature, scope, and significance of physical education throughout history. Three hours lecture per week. Three credit hours.

HSCI 3372 Advanced First Aid
Training individuals to realize ethical and legal obligations in rendering competent first aid in case of accident or injury until a physician can be found. American Heart Association advanced first aid certification on successful completion of the course. Three hours lecture per week. Three credit hours.

HSCI 3374 Community Health Agencies
Principles and practices of public health and voluntary health programs and agencies. Students make guided observation in laboratory situations and engage in seminars. Three hours lecture per week. Three credit hours.

HSCI 3377 Drug Education
An in-depth study of drug education designed to help teachers, administrators, and other special interest groups present drug education programs. Three hours lecture. Three credit hours.

HSCI 3391 Cooperative Education in Health Education
Prerequisites: junior standing, acceptance as a health sciences major, minimum GPA of 2.50, and consent of program coordinator. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their health sciences career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

HSCI 3402 Kinesiology
Prerequisites: BIOL 1401, 1412, or the equivalents. An anatomical and physiological analysis of body movements with relation to the muscles, articulations, and nervous tissue involved. Does not count toward a major or a minor in biology. Two hours lecture, four hours laboratory per week. Four credit hours.

HSCI 4330 Activity and Sports Management
A study of the organization and administration of programs in physical education and sports. Topics include the development of administrative policy regarding budget, finances, marketing, philosophy, public relations, facilities, sports law, and program management. Dual-listed in the UIAR Graduate Catalog as HSCI 5330. Three hours lecture. Three credit hours.

HSCI 4340 Adaptive Physical Education
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 their complications for participating in physical education along with classrooms, 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. Dual-listed in the UIAR Graduate Catalog as HSCI 5340. Three hours lecture per week. Three credit hours.

HSCI 4350 Methods and Techniques of Teaching Physical Education
A study of the methods and techniques of teaching physical activity in high school physical education programs. Emphasis is on opportunities to learn about organizing and planning programs, developing lesson plans, selection of activities, and evaluation procedures. Dual-listed in the UIAR Graduate Catalog as HSCI 5350. Three hours lecture per week. Three credit hours.

HSCI 4371 Health Education Concepts and Applications
Examination of the concepts, philosophy, and applications of health education in public, private, professional, and commercial organizations that exist to improve and maintain health. Dual-listed in the UIAR Graduate Catalog as HSCI 5371. Three hours lecture per week. Three credit hours.

HSCI 4372 First Aid Instructor Training
Prerequisites: HSCI 3372, current American Red Cross first aid certification. Students under supervision develop a lesson plan, observe teachers, develop tests, and participate in the American Red Cross first aid program. Instructor training course for candidates to become certified by the American Red Cross to teach standard first aid and personal safety. Three hours lecture per week. Three credit hours.

HSCI 4373 Controversial Issues in Health Education
Designed to expand the health educator’s knowledge of health issues as they are influenced by laws, public opinion, and scientific knowledge; an in-depth study of current controversial issues in health education. Dual-listed in the UIAR Graduate Catalog as HSCI 5373. Three hours lecture per week. Three credit hours.

HSCI 4374 Family Life and Sex Education
A study of dating, engagements, marriage, children, divorce, and sexual behavior patterns. Three hours lecture per week. Three credit hours.
HSCI 4376 Mental Health Education
Examination of methods to be used by teachers to develop the mental health of individual students. Emphasis on the health educator’s role in reducing mental and emotional problems. Three hours lecture per week. Three credit hours.

HSCI 4378 Organization and Administration of Health Education Programs
Prerequisites: HSCI 1370, senior or graduate standing. Designed to provide a foundation in health education and promotion in community health agencies. Students will also examine the basic school health education program which includes healthful school living, health services, and health instruction. Dual-listed in the UALR Graduate Catalog as HSCI 5378. Three hours lecture per week. Three credit hours.

HSCI 4379 Methods and Techniques of Teaching Health Education
Prerequisite: HSCI 1370. Basic philosophic structure of an efficient, meaningful, and effective health education program for early and late adolescence. Experience in organizing and planning programs (horizontal and vertical), developing lesson plans, experimenting with a variety of teaching methods and techniques, selection of appropriate learning experiences, and directed experience in health instruction. Three hours lecture per week. Three credit hours.

HSCI 4391 Cooperative Education in Health Education
Prerequisites: junior standing, acceptance as a health sciences major, minimum GPA of 2.50, minimum of one semester of HSCI 3391, and consent of program coordinator. Cooperative education seeks to integrate academic and professional work experiences. Students will be placed in a work setting consistent with their health sciences career objectives. This course requires a minimum of 200 semester work hours. Three credit hours.

HSCI 4194, 4294, 4394 Workshop in Health Education
Provides opportunities for students, inservice teachers, and interested individuals to work and study with health education professionals. The student can expect to spend two to four hours per week (15 week semester) on the workshop for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the workshop and will be specified in advance by the instructor. One, two, or three credit hours.

HSCI 4402 Fitness Management
Prerequisites: BIOL 1411, 1412, HSCI 3302 or the equivalents. This course is designed to train students in the theory and skills required for the administration of fitness programs in industry, YMCAs, rehabilitation clinics, and similar facilities. Assessment of various physical and physiological parameters, administration of stress tests, formulation of exercise prescriptions, and basic EKG interpretation. Two hours lecture, four hours laboratory per week. Four credit hours.

HSCI 4100-4600 Independent Study in Health Education
Prerequisite: consent of department chairperson. Provides an opportunity for advanced students to conduct an in-depth study in a specific area of interest or a special problem. May be taken for one to six credit hours. The student is expected to spend two to four hours per week on the project 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 instructor. One, two, three, four, five, or six credit hours.

HSCI 4695 Internship in Health Education
Prerequisites: senior standing, 3195, 3196, consent of program coordinator. Directed observation and supervised field work in a health education professional setting. Emphasis on administration, supervision, and program leadership in public, private, or voluntary health agencies, institutions, or business. Six hours credit for 200 clock hours. Six credit hours.

Information Assurance

IFAS 2300 Introduction to Information Assurance
Prerequisite: RHET 1312. Study of information security for roles as security professionals and business decision-makers. This course addresses knowledge areas of the Certified Information Systems Security Professional (CISSP) certification, including need for security, legal and ethical issues, risk management, security technologies and tools, and personnel security maintenance. Three hours lecture. Three credit hours.

IFAS 3300 Computer Forensics
Prerequisite: IFAS 2300 and knowledge of Unix or Linux, as well as Windows operating systems. Study of the preservation, identification extraction,
IFSC 1110 Introduction to Ethics  
See PHIL 1110. One hour lecture per week. One credit hour.

IFSC 1201 Enterprise Information Science I  
Prerequisite: Familiarity with using a desktop computer. Hands-on, project-oriented experiences to develop the basic software tools expertise expected of a student in information science. Exercises in Windows, Microsoft Office, and the Internet including email, FTP, and web page building. A computer-based laboratory course whose assignments involve both individual and team activities. Two hours lab per week per credit hour. Two credit hours.

IFSC 1202 Enterprise Information Science II  
Prerequisite: IFSC 1201 or consent of the department. Continuation of Enterprise Information Science I; includes introduction to UNIX and basic algorithms and programming in Visual Basic and elementary SQL, emphasis on understanding graphical user interface technology. This is a laboratory-computer-based course with lab exercises pursued individually and in teams. Two hours lab per week per credit hour. Two credit hours.

IFSC 1305 Problem-Solving Techniques in Information Science  
Prerequisite: MATH 1302 or equivalent. Corequisite: IFSC 1201 or equivalent. Examines methods of problem solving in mathematical and non-mathematical contexts. Introduces concepts that pertain to the programming and code patterns, and various diagramming techniques. Uses spreadsheet software and other software tools when appropriate. Three hours lecture per week. Three credit hours.

IFSC 1310 Internet Technologies  
Prerequisites: IFSC 1301 or consent of the department. Building on the foundation of web page building in static HTML, this course presents using Dynamic HTML, CGI and JavaScript programming. Also addresses client-pull and server-push technology, elements TCP/IP, and basic Internet protocols pertaining to HTTP, FTP, Telnet, and electronic mail servers and clients. Three hours lecture per week. Three credit hours.

IFSC 2300 Object-oriented Technology  
Prerequisites: IFSC 1202 and IFSC 1305 or consent of the department. Computer programming in Java language used to implement applications that employ objects and demonstrate software development by refinement and inheritance. Topics include data types, control structures, repetitive structures; data structures including arrays, lists, queues, stacks, and trees; recursion; and File I/O. Two hours lecture and two hours lab per week. Three credit hours.

IFSC 2305 Computer Systems  
Prerequisite: IFSC 1205 or consent of instructor. In-depth introduction to the components of a personal computer; topics include number systems, identification and organization of CPU, memory, and peripherals; cache technology; bus technology; upgrading, troubleshooting, and maintaining a personal computer. Incorporates hands-on laboratory experiences. Three hours lecture per week. Three credit hours.

IFSC 2315 Information Systems Software  
Prerequisites: IFSC 2300 and 2305. Computer operating system concepts including processor and memory management, multiprocessing and multiprogramming, interprocess communication, scheduling, virtual memory, device management, input/output, secondary storage and file management, and protection. Three hours lecture per week. Three credit hours.

IFSC 2340 Human Computer Interface  
Prerequisites: IFSC 1310 and 2300, or consent of instructor. In-depth study of building user interfaces; user requirements, design, aesthetics, and programming. Three hours lecture per week. Three credit hours.

IFSC 3310 Information Systems Software II  
Prerequisite: IFSC 2315 and MATH 2310, programming knowledge of Java or C/C++ or consent of instructor. Concepts of mass-storage structures distributed systems, and protection and security. Includes network structures, distributed communication, distributed coordination, distributed file systems and operating system security. Various mechanisms to protect files, memory segments, CPU, and other systems resources are studied. Unauthorized access, malicious destruction/alteration, and intrusion detection techniques discussed. Three hours lecture per week. Three credit hours.

IFSC 3315 Applied Networking  
Prerequisite: IFSC 2300. Networking concepts with emphasis on the internet. OSI and internet layering conventions studies to cover the operation of an application system with imbedded network components. End-to-end protocols, encryption, and firewalls considered as components of a complete systems with individual contributions to overall system performance. Three credit hours.

IFSC 3320 Database Concepts  
Prerequisites: junior standing or consent of the instructor. Offers an introduction to the fundamentals and use of relational databases and focuses on four major topics: ER-diagram, relational algebra, SQL language and Oracle. Three hours lecture. Three credit hours.

IFSC 3330 Current Trends in Database Technology  
Prerequisite: IFSC 3305, 3320, and MATH 2310 or consent of the instructor. Current trends in database design and management emphasizing typical applications in business, medicine, and science. Survey of modern database technologies including object-related database technology, query processing and optimization, transaction processing concepts, concurrency control techniques, database security and authorization, data mining, data warehousing, and web search engine technology. Discussion of database management and distributed database management issues. Three hours lecture. Three credit hours.

IFSC 3360 System Analysis and Design  
Prerequisite: IFSC 3320 or equivalent. Fundamental concepts of object-oriented software analysis and design including requirements specification, analysis, and design of software; issues in software reuse, software packaging, and software management. Three hours lecture per week. Three credit hours.

IFSC 4210 Computer Ethics  
Prerequisite: senior standing in Information Science or consent of the instructor. Study of professional codes of ethics and the responsibilities that they place on technologists. Introduction to the ethics of communication technologies and implications of ethical concerns in the application of technology and the use of moral reasoning to comprehend issues of privacy, security, ownership, protection, and law. Two hours lecture per week. Two credit hours.

IFSC 4310 Quantitative Analysis  
Prerequisite: MATH 1452, STAT 3352. Survey of mathematical techniques that support decision-making. Decision analysis, regression models, forecasting, linear and integer programming models, simulation modeling and project management. Three hours lecture. Three credit hours.

IFSC 4325 Data Mining Concepts and Techniques  
Prerequisite: IFSC 3330 or equivalent. An in-depth, practical coverage of essential data mining topics, including OLAP and data warehousing, data preprocessing, concept description, association rules, classification and prediction, and cluster analysis. Advanced topics include mining object-relational databases, spatial databases, multimedia databases, time-series databases, text databases, the World Wide Web, and applications in several fields. Three hours lecture. Three credit hours.

IFSC 4330 Database Security  
Prerequisite: IFSC 3330 or equivalent. Focus on security issues in databases systems and introduction of how current and future commercial systems may be designed to ensure secrecy and confidentiality. Topics include security models, basic security mechanisms and software, statistical database security, intrusion detection, security models for next generation databases, tested techniques and proven strategies for securing an Oracle environment — from the operating system to the database to the application or management security using Oracle’s built-in tools. Three hours lecture. Three credit hours.

IFSC 4339 Network Security  
Prerequisite: MATH 2310 or equivalent, and IFSC 3315 or CSIS 4384 or SYEN 3332 or MGMT 4310, or consent of instructor. This course provides students with a concise and in-depth overview of security issues in current computer networks. It first gives a brief introduction of cryptographic algorithms and protocols underlying network security applications, including encryption, hash function, public key algorithm, digital signatures, and key exchanges. Then it focuses on the security issues in current computer networks as well as network security tools and applications. The course will cover network intrusion/detection techniques and systems. Three hours lecture. Three credit hours.

IFSC 4350 Electronic Commerce  
Prerequisite: IFSC 3310 or equivalent and senior standing or consent of instructor. Seminar style course designed for student to be able to describe and apply different electronic commerce business models. Understand technologies in electronic commerce, including the internet and WWW, security systems, electronic payment systems, and intelligent agents. Three hours lecture. Three credit hours.

IFSC 4376 Applied Cryptography  
See CSIS 4376 Applied Cryptography.

IFSC 4391 Cooperative Education  
Prerequisites: junior or senior standing in information science and consent of chairperson if substituted for a major elective. Work experience to complement and extend the classroom experience through the application of a student’s academic experiences in information science in a professional information technology environment. A minimum of 200 hours of work with the participating employer is required. The exact number of hours per week, activities, and responsibilities are dependent upon the requirements of the work experience and must be specified in written agreements coordinated with the UALR Office of Cooperative Education. Three credit hours.

IFSC 4395, 4695 Internship  
Prerequisite: junior or senior standing in information science and consent of the chairperson if substituted for a major elective. Professional experience related to the student’s major emphasis under supervision of an advisor. A minimum of four hours work on site per week for each credit hour. Advisor files a grade contract with the chairperson. Three or six credit hours.
IFSC 4396 Information Systems Application
Prerequisite: IFSC 3330. Capstone course in which student teams do an analysis of a live information system, document and present their conclusions. Projects are chosen at the end of IFSC 3330. Teams coordinate their efforts on a sponsor’s site and make regular report to the instructor. Classroom meetings are held as necessary to conduct orientations and hear presentations. Three credit hours.

IFSC 4398 Capstone Project
Prerequisite: IFSC 4396. Continued capstone course in which student teams pursue the design and implementation of system improvements identified in IFSC 4396. Deliverables and schedule are determined by the instructor. Classroom meetings are held as necessary to conduct orientations and hear presentations. Three credit hours.

IFSC 4100, 4200, 4300, 4400, 4500, 4600 Independent Study
Prerequisite: consent of chairperson. Individual research by the advanced student. Topics determined on the basis of faculty interest and availability. Two to four hours per week per credit hour. The exact time and nature of the experience depends on the subject matter and is agreed upon at the beginning of the term by the student and the instructor. Agreement must be in writing and filed with the chairperson. May be repeated. Maximum of six credit hours can be applied toward IFSC major requirements. One, two, three, four, five, or six credit hours.

IFSC 4199, 4299, 4399, 4499 Special Topics
Prerequisite: junior standing or consent of instructor. Advanced, specialized topics of current interest in information science. May be repeated up to a maximum of 12 credit hours counting toward the major. Dual-listed in the UALR Graduate Catalog as IFCI 5199, 5299, 5399, 5499. One, two, three, or four hours lecture or equivalent per week. One, two, three, or four credit hours.

Information Technology (ITEC)

ITEC 3610 Introduction to Information Technology and Applications
Prerequisite: admission to the information technology minor. This course introduces students to the information technology industry and knowledge based tools. Students demonstrate proficiency in such tools as spreadsheet applications, graphic presentation, internet uses, and programming. Methods include guest speakers, team activities, interpersonal skills, problem solving skills, time management skills, role playing, and portfolio strategies. Graded A, B, I, or NC. Six credit hours.

ITEC 3650 Guided Applications in Information Technology and Industry Processes
Prerequisite: grade of A, B, or I in ITEC 3610. Project oriented guided applications course. Focus is on broad applications of information technology such as database management, web design, and internet applications. Students develop web pages to collect data, structure and analyze data using database and spreadsheet software, and present textual and graphical representation of the results. Methods include team projects with rotating roles, problem conceptualization, time management, and presentation skills. Graded A, B, I, or NC. Six credit hours.

ITEC 4610 Project Development and Portfolio Defense
Prerequisite: grade of A, B, or I in ITEC 3650. The project and portfolio development course allows students, under direction of a mentor, to work on real life issues in an active learning environment. Students will present and defend a professional Information Technology Portfolio documenting proficiency in the use of technology to solve problems. Methods include IT internships, special projects, or major field applications. This course is to be completed in two phases. The first phase, “Project Planning and Portfolio Development,” includes problem identification, needs assessment, and system design specifications. The second phase, “Project Completion and Portfolio Defense,” includes design testing, verification, and customer satisfaction. Students should expect that these two phases should take no less than one semester and no more than one academic year. Graded A, B, I, or NC. Six credit hours.
Integrated Science and Mathematics (IGSC)

IGSC 4401 Integrated Science Methods
Prerequisite: 16 credit hours of science courses. Lecture, laboratory, and field methods stress the learning of science as active, integrated, constructive processes involving experimentation, investigation, communication, reasoning, and problem solving as applied to life, earth, and physical systems. Dual-listed in the Graduate Catalog as IGSC 5401. Three hours lecture and two hours laboratory per week.

Interdisciplinary Study (IDST)

The content of each of these courses changes with each offering. Interested students should consult the list of current course offerings for the title, description, and teachers of each course. More information can be obtained from one of the instructors listed.

In general, interdisciplinary courses address a theme or a problem from the viewpoints of several academic disciplines or a subject that does not fall within one of those disciplines. These courses are often supervised by more than one teacher. Courses include:

IDST 1100, 1200, 1300
IDST 2100, 2200, 2300
IDST 3100, 3200, 3300
IDST 4100, 4200, 4300

Each interdisciplinary studies course carries a number and title indicating that course’s level, credit hours, and subject, such as IDST 3312 The Humanities and Technology. All such courses apply as credit hours toward the total needed for graduation and as elective hours. Their applicability toward a major or minor is determined by the department, college, or school of the student’s major or minor field.
INTR 3320 American Sign Language I
An elementary course in American Sign Language (ASL) using a natural language approach to introduce culturally appropriate signed concepts related to the immediate environment. Common communicative events and interactions are utilized to acquire basic working vocabulary and grammar. Includes development of appropriate linguistic/cultural behaviors and awareness of respect for deaf culture. Receptive and expressive skills are fostered through interactive ASL lessons without voice. Three credit hours.

INTR 3321 American Sign Language II
Prerequisite: INTR 3320. An intermediate ASL course progressing from common, concrete communicative events and interactions to language usage expressing abstract ideas. Emphasis is on the comprehension and production of increasingly complex linguistic structure focusing on dialogues and conversational expressions. More complex receptive and expressive skills are fostered through interactive ASL lessons without voice. Three credit hours.

INTR 3320 American Sign Language III
Prerequisite: INTR 3321. A conversational ASL course focusing on specific grammatical and cultural topics. Emphasis is on the development of fluent conversational skills utilizing grammatical non-manual signals and markers. Students will learn how to narrate, describe, compare, and comment. Narratives of native language users are utilized for beginning text analysis of ASL. Interactive ASL lessons without voice lead to expanded vocabulary mastery and fluency. Three credit hours.

INTR 3321 American Sign Language IV
Prerequisite: INTR 3320. Corequisite: INTR 3344. An advanced ASL performance course integrating cultural and linguistic competencies ranging from informal to formal communication events. Emphasis is on greater fluency in idiomatic language usage and mastery of vocabulary and syntax. Linguistic competence is enhanced through interactive discourse with native language users. Three credit hours.

INTR 3320 Manually Coded English in Educational Settings
Prerequisite: INTR 3231. Designed to expose students to a variety of signed English systems. Students learn the rules governing the selection of signs and the rationale for sign language systems in the educational setting. Focus is on learning Signing Exact English (SEE II) as adopted by educational systems and state schools for the deaf. Three credit hours.

INTR 3244 Introduction to Interpreting
Designed to provide students with a working knowledge of the profession of interpreting including the Code of Ethics, certification criteria, the roles and responsibilities of an interpreter, and compensation. Discussions of the role of the interpreter in a variety of professional settings including educational, medical, legal, the performing arts, counseling, and rehabilitation. Three credit hours.

INTR 3260 Oral Translating
Restricted to students who have been admitted to the Interpretation program. A study of the mechanics of oral and skilled necessary for interpreting for persons who are deaf and use the oral approach. Students will develop and practice appropriate techniques necessary for verbatim translating and voicing, and paraphrasing in a variety of interpreting settings. Three credit hours.

INTR 3270 Practicum
Prerequisite: INTR 2320 or prior permission of the instructor. Restricted to students who have been admitted to the Interpretation program. Exposure and experience in using sign language/oral skills in settings with individuals who are deaf or hard of hearing. Offers students opportunities to enrich and reinforce knowledge of syntax and culture for greater linguistic mastery. Three credit hours.

INTR 3268 Intermediate Interpreting/Translating
Prerequisites: Associate of Arts degree in Interpretation or equivalent, QAST Level I or equivalent, INTR 3364, and 3366, or permission of program coordinator. Restricted to students who have been admitted to the Interpretation program. An intermediate level interpreting and transliterating skills course designed to enhance both linguistic competencies and cultural appropriateness. Discussion of the role and responsibilities of interpreters and consumers, as well as ethical questions and dilemmas encountered during professional interpreting experiences. Includes practice of skills and process tasks of increased complexity with unplanned and planned language samples, such as dialogues, monologues, interviews, and lectures from a variety of interpreting settings. Two credit hours.

INTR 3330 Fingerspelling
Prerequisite: INTR 3230. A course designed to develop expressive and receptive fingerspelling skills. Emphasis will be on whole-word and phrase recognition, as well as on reading fingerspelling embedded in signed sentences. Expressive skills will focus on attainment of normal speed, clarity, and fluency. Extensive interaction and drills with the instructor-student(s) will enhance receptive and expressive speed and skill. Videotaped fingerspelling lessons of varying speeds embedded in sentences will be utilized for practice of receptive comprehension. Three credit hours.

INTR 3344 Interpretation Theory and Process
Prerequisite: INTR 2342. Corequisite: INTR 3231. This course uses a process-oriented approach to applying the essential cognitive strategies to interpretation. Restricted to students who have been admitted to the Interpretation program. These strategies include organizing and manipulating visual images, analyzing message for meaning, and self-monitoring for message accuracy. The course serves as a transition from language learning to beginning interpretation from American Sign Language (ASL) to English. Three credit hours.

INTR 3346 Principles of Educational Interpreting
Prerequisite: Associate of Arts degree in Interpretation or equivalent, QAST Level I or equivalent, and INTR 2342, or permission of program coordinator. Corequisites: INTR 3268. Issues related to interpreting in classrooms at the elementary, secondary, and post-secondary levels. Emphasis is on learning and practicing the various modes of communication used by persons who are deaf-blind. Students will become familiar with sighted guide techniques and the aids and devices available to persons who are deaf-blind. Tactile forms of communication will be enhanced during role-play situations. A service-learning component will provide the opportunity to apply classroom knowledge and skills in real life situations, while meeting community need. Reflective discussion and writing is emphasized throughout the course. Three credit hours.

INTR 3350 Artistic Interpreting in Educational Settings
Prerequisite: INTR 3231. Restricted to students who have been admitted to the Interpretation program. Designed to teach students the skills needed to interpret music, prose, poetry, and drama in a visually artistic manner. Emphasizes appropriate use of conceptually accurate signs, facial expression, movement, and rhythm. Three credit hours.

INTR 3358 Interpreting for Persons who are Deaf-Blind
Prerequisite: INTR 2320, 2342. Restricted to students who have been admitted to the Interpretation program. A study of the major causes of deaf-blindness and its impact on communicative and life-style settings. Emphasis is on learning and interpreting signs and satisfying the various modes of communication used by persons who are deaf-blind. Students will become familiar with sighted guide techniques and the aids and devices available to persons who are deaf-blind. Tactile forms of communication will be enhanced during role-play situations. A service-learning component will provide the opportunity to apply classroom knowledge and skills in real life situations, while meeting community need. Reflective discussion and writing is emphasized throughout the course. Three credit hours.

INTR 3360 Interpreting Contextually Bound English Lexicon
Prerequisite: INTR 3231. Restricted to students who have been admitted to the Interpretation program. Acquisition of skills needed for interpreting contextually bound English lexical items to appropriate ASL, English language varieties, and English-based signing systems. Focus on developing ability to produce semantically/conceptually accurate signs by analyzing English idioms and idiomatic expressions, multiple meaning English words, and ASL idiomatic expressions. Will include analysis and selection of alternative and synonymous signs to convey intent and meaning of the message. Three credit hours.

INTR 3370 Ethical Standards and Practices for Interpreters
Prerequisite: INTR 3231. Corequisites: INTR 3364, and 3366. Restricted to students who have been admitted to the Interpretation program. Acquisition of skills and vocabulary for interpreting in specialized settings such as medical, mental health, legal, rehabilitation, counseling, technical, and religious fields. Emphasis on acquisition of specific terminology, concepts, and protocol in each area. Three credit hours.

INTR 3362 Interpreting in Specialized Settings
Prerequisite: SCPI Intermediate, completion of all prior A.A. degree courses and core requirements, INTR 2321, and 3360, or permission of program coordinator. Corequisites: INTR 3364 and 3366. Restricted to students who have been admitted to the Interpretation program. Acquisition of skills and vocabulary for interpreting in specialized settings such as medical, mental health, legal, rehabilitation, counseling, technical, and religious fields. Emphasis on acquisition of specific terminology, concepts, and protocol in each area. Three credit hours.

INTR 3364 Sign to Voice Interpreting/Translating
Prerequisites: SCPI Intermediate, completion of all prior A.A. degree courses and core requirements, INTR 2321, and 3360, or permission of program coordinator. Corequisites: INTR 3362 and 3366. Restricted to students who have been admitted to the Interpretation program. Designed to develop skills in sign voice interpreting for persons who are deaf. Students will learn to use voice simultaneously and consecutively while viewing videotapes of native signers who use a variety of signing modalities to communicate. Audiotapes will provide students with immediate feedback for practice. Three credit hours.

INTR 3366 Voice to Sign Interpreting/Translating
Prerequisites: SCPI Intermediate, completion of all prior A.A. degree courses and core requirements, INTR 2321, and 3360, or permission of program coordinator. Corequisites: INTR 3362 and 3366. Restricted to students who have been admitted to the Interpretation program. Designed to develop interpreting and transliterating skills through the use of audiotapes and videotapes. Students will also learn to select and assess appropriate modality and language levels. Emphasis will be on the process of interpreting and developing fluency, speed, and accuracy. Three credit hours.
INTR 3370 Ethical Standards and Practices for Interpreters
Prerequisite: Associate of Arts degree in Interpretation or equivalent, QAST Level I/I or equivalent, INTR 3362, 3364, and 3366, or permission of program coordinator. Corequisite: INTR 3268. Restricted to students who have been admitted to the Interpretation program. A course designed to teach and practice a model for ethical decision making within the field of interpretation. Students will study codes from international interpreting organizations, the RID Code of Ethics, the QAST Code of Ethics, the Arkansas Code for interpreters in the judiciary and the NCI Code of Ethics. The RID Ethical Practices System will be reviewed. Various interpreting scenarios presenting ethical dilemmas will be discussed and/or role playing applying the Humphrey/Alcorn Decision-Making Model to the NCI Code of Ethics. Three credit hours.

INTR 4102, 4202, 4302 Workshop
Special topics. One, two, or three credit hours.

INTR 4108, 4208, 4308 Independent Study
Prerequisite: consent of coordinator. Special topics. One, two, or three credit hours.

INTR 4320 Survey of Communication Methods
Overview of the various communication methods, systems, and languages (English and American Sign Language) used by children and adults who are deaf or hard of hearing, condensed into one course specifically for students in the deaf education program. An emphasis will be placed on understanding the intra- and cross-cultural communication issues that provide the impetus for choice of communication method and/or language. Focuses on the development of conceptually accurate sign language skills utilizing English structure in an interactive approach for receptive and expressive sign language fluency. Dual-listed in the UALR Graduate Catalog as INTR 5320. Three credit hours.

INTR 4322 Comparative Linguistics: ASL and English
Prerequisites: INTR 2320, 2342. Study of the fundamental concepts of linguistics and its application to the study of American Sign Language. Focuses on the current state of research of linguistic inquiry such as phonology, morphology, syntax, and use of language. Compares and contrasts basic similarities and differences between ASL and English with a goal to develop critical thinking about the structure of ASL. Includes a two-part videotape that supplements the textbook by providing examples of signs/concepts discussed in the course. Three credit hours.

INTR 4340 Deaf Culture
An interdisciplinary study of American deaf culture and the factors that contribute to defining the deaf community as a cultural minority, focusing on an awareness and understanding of cultural diversity and preservation of language. Covers the cultural identity, group norms, rules of social interaction, values, and traditions held by members who are deaf. Societal attitudes regarding deafness and issues such as cultural oppression and language power by the majority culture will be discussed, as well as the contributions of folklore, literature, plays and works of art made by persons who are deaf to the larger American culture and to their own community organizations. The impact of modern technology, emerging issues, trends, and advocacy with the deaf community are presented. Dual-listed in the UALR Graduate Catalog as INTR 5340. Three credit hours.

INTR 4380 Advanced Transliteration: English - English
Prerequisite: Associate of Arts degree in Interpretation or equivalent, QAST Level I/I or equivalent, INTR 3288, and completion of or current enrollment in all prior B.A. degree courses, or permission of program coordinator. Corequisite: INTR 4382. Restricted to students who have been admitted to the Interpretation program. Continuation of sign to voice and voice to sign transliterating skills development. Course includes practice in appropriate sign/spoken vocabulary selection, the matching or register in the formal setting, and quality voice production. Students will focus on transliterating signed/spoken English in highly technical situations and develop specialized vocabulary in areas typically utilizing transliterators. Three credit hours.

INTR 4382 Advanced Interpretation: ASL - English
Prerequisite: Associate of Arts degree in Interpretation or equivalent, QAST Level I/I or equivalent, INTR 3268, and completion of or current enrollment in all prior B.A. degree courses, or permission of program coordinator. Corequisite: INTR 4380. Restricted to students who have been admitted to the Interpretation program. Continuation of the interpretation process between ASL and English including application of process skills, contrastive ASL-English linguistics, contrastive cultural analysis, and teeming skills for the consecutive and simultaneous interpretation process. Designed to include practice of requisite skills and process tasks of increased complexity with unplanned and planned language samples, such as dialogues, monologues, interviews, and lectures from a variety of interpreting settings. Three credit hours.

INTR 4384 Interpreting Academic Subjects
Prerequisites: Associate of Arts degree in Interpretation or equivalent, QAST Level I/I or equivalent, INTR 3346, 3362, 3364, and 3366, or permission of program coordinator. Restricted to students who have been admitted to the Interpretation program. Acquisition of interpreting/transliteration skills across a variety of academic subjects commonly taught in elementary through post-secondary settings. Emphasis on incorporating and pairing conceptually accurate sign usage within a variety of English-bound sign systems, as well as acquisition of specialized sign vocabulary for academic content areas. Three credit hours.

INTR 4970 Internship
Prerequisites: Associate of Arts degree in Interpretation or equivalent, QAST Level I/I or equivalent, INTR 4380, 4382, and completion of or current enrollment in all prior B.A. degree courses, or permission of program coordinator. Restricted to students who have been admitted to the Interpretation program. Practical experience in settings such as educational, rehabilitation, community service centers, and agencies serving children, adolescents, and/or adults who are deaf or hard of hearing. Designed to provide students with the opportunity to synthesize practical and academic experiences gained during the in-residence portion of the program. The site, supervision, and plan of activity will be agreed upon mutually by student and instructor before the semester begins. Nine credit hours.
International Studies (INTS)

INTS 2301 World Cultures
A study of traditional culture of major world areas emphasizing values and systems that lead to cultural unity and cultural diversity, followed by a study of the modernization of each culture and the extent to which the cultures have interacted and changed as a result of intercultural contact during the 19th and 20th centuries. Three credit hours.

INTS 2302 Global Issues
A study of issues of concern throughout the modern world, the reaction of cultural entities to those issues, global dynamics, and the ways in which international assessments are made. Three credit hours.

INTS 3321 Topics in Modern International Cultures
Modern institutions and lifestyles in cultures selected from the major regions of Europe, Asia, Africa, and Latin America. The course emphasizes different patterns of behavior found in cultural areas outside the U.S. The specific focus of the course will vary from time to time. It may be repeated for credit if the content is different. Three credit hours.

INTS 3350, 3351 Cooperative Education Work Experience I and II
Prerequisites: major in international studies, INTS 2301, 2302, ECON 2321, FREN, GERM, or SPAN 2312, at least six upper-level required international studies hours, basic computer literacy, and consent of the international studies coordinator. Designed to complement and extend the classroom learning experience through application of theoretical concepts in a professional work environment with an international dimension. The exact number of work hours, activities, and responsibilities is dependent on the nature of the work experience and must be specified in a written agreement between employer and student in coordination with the Office of Cooperative Education. Three credit hours.

INTS 4101 Senior Research Project
Proposal. Required for international studies majors. An independent research project that is completed over two semesters under the guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4101), a formal paper (4102), and an oral presentation (4103), each providing one hour of academic credit. A student may enroll in INTS 4102, 4103 only after completing an acceptable proposal (INTS 4101) in the previous semester. One credit hour.

INTS 4102 Senior Research Project
Final Paper. Required for international studies majors. An independent research project that is completed over two semesters under the guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4101), a formal paper (4102), and an oral presentation (4103), each providing one hour of academic credit. A student may enroll in INTS 4102, 4103 only after completing an acceptable proposal (INTS 4101) in the previous semester. One credit hour.

INTS 4103 Senior Research Project
Oral Presentation. Required for international studies majors. An independent research project that is completed over two semesters under the guidance of a faculty supervisor whose field is related to the proposed area of investigation. The project has three components, consisting of a proposal (4101), a formal paper (4102), and an oral presentation (4103), each providing one hour of academic credit. A student may enroll in INTS 4102, 4103 only after completing an acceptable proposal (INTS 4101) in the previous semester. One credit hour.

INTS 4300 Seminar
For international studies majors. An integrative, in-depth study of a specified regional problem or global issue, related to the area of concentration, requiring analysis of traditional values and current issues and problems. Three credit hours.

INTS 4350 Internship
For international studies majors or minors. Field experience with businesses, industries, and agencies involved in the international area. Supervised by the company or agency and a faculty member. Students are expected to apply theoretical concepts to active world situations and develop appropriate working skills and experience. Credit, no credit grading available on request. Three credit hours.

Journalism (JOUR)

JOUR 1340 Fundamentals of Photography
Fundamentals of black and white photography and an introduction to color photography. Laboratory instruction in darkroom procedures. Students must provide a 35mm adjustable camera. Credit hours may not be applied to the journalism major or minor requirements. Three credit hours.

JOUR 2320 Mass Media and Society
Survey of relationships involving mass media, culture, and various other interconnected systems, both nationally and globally. Includes discussion of functions, freedoms, and responsibilities of mass media, and effects on individuals and social groups. Topics will include newspapers, magazines, radio, television, and other media. Three credit hours.

JOUR 2350 Techniques of Writing for the Mass Media
Introduction to basic news and feature writing styles. Style and story structure for print and electronic media. Laboratory instruction and practice in writing for publication. Three credit hours.

JOUR 3320 Reporting Principles
Prerequisite: JOUR 2350. Application of principles of news writing to journalism practice; development of skills in evaluating the news, interviewing, and gathering information. Laboratory instruction and practice in objective reporting. Materials submitted as assignments are subject to publication. Three credit hours.

JOUR 3330 Photojournalism
Fundamentals of news and feature photography for newspaper and magazine publication. Laboratory instruction in darkroom procedures. Materials submitted as assignments are subject to publication. Three credit hours.

JOUR 3350 News Editing
Prerequisite: JOUR 2350. Recommended corequisite: JOUR 3320. Introduction to news editing. Instruction and practice in content editing, style editing, and headline writing for the print media; use of computers to edit copy; fundamentals of design for the print media. Three credit hours.

JOUR 3365 Radio-Television Journalism
Prerequisites: JOUR 2350, RTVF 2300. Recommended prerequisite: RTVF 3320. Writing and editing news and commentary for radio and television; procedures and style in broadcast and telecast news. Three credit hours.

JOUR 3366 Electronic News Gathering
Prerequisite: JOUR 3365 or consent of instructor. Recommended prerequisite: RTVF 3320. Study and application of advanced techniques of reporting, writing, and delivery of radio and television news. Examination of different approaches to planning news coverage, gathering audio and video actualities, interviewing techniques, and the principles of packaging news stories. Three credit hours.

JOUR 3375 Feature Writing
Prerequisite: JOUR 3320 or 3365 or consent of instructor. Planning, researching, and writing the newspaper feature article. Emphasis on humanistic reporting and backgrounding the news. Materials submitted as assignments are subject to publication. Three credit hours.

JOUR 4350 Editing, Design, and Production
Prerequisite: JOUR 3350. Decision-making in the editing process. Principles of typography, publication design, and printing processes. Experience in the use of computers to design camera-ready materials for publication. Dual-listed in the UALR Graduate Catalog as JOUR 5350. Three credit hours.

JOUR 4352 Mass Communication Law
Prerequisite: junior standing. The restrictions, obligations, and responsibilities of the press under the law and its role in publishing and broadcasting; relation between the law and freedoms protected by the U.S. Constitution. Dual-listed in the UALR Graduate Catalog as JOUR 5332. Three credit hours.

JOUR 4353 History of the Mass Media in America
Prerequisite: junior standing. Development of the mass media from their beginnings. Political, social, and economic interaction of the American people and the media, as related to historical precedent. Lives of eminent journalists. Three credit hours.

JOUR 4357 Seminar in Radio-Television Journalism
Prerequisite: junior standing. Broadcast news policies; history; governmental and other forms of regulation; social implications; influence of various publics on radio-television news coverage. Dual-listed in the UALR Graduate Catalog as JOUR 5337. Three credit hours.

JOUR 4358 Reporting of Public Affairs
Prerequisite: JOUR 3320 or 3365 or consent of instructor. Practice in gathering material and writing in-depth stories on public affairs; emphasis on courts, government, education, ecology, the economy, and social issues. Materials submitted as assignments are subject to publication. Dual-listed in the UALR Graduate Catalog as JOUR 5338. Three credit hours.

JOUR 4359 Magazine Journalism
Prerequisite: JOUR 3320 or consent of instructor. Writing the nonfiction magazine article; free-lance marketing procedures. Dual-listed in the UALR Graduate Catalog as JOUR 5359. Three credit hours.

JOUR 4375 Journalistic Freedom and Responsibility
Prerequisite: junior standing. Journalistic ethics and practices; professional conduct and responsibilities of the journalist in a free society. Dual-listed in the UALR Graduate Catalog as JOUR 5375. Three credit hours.
JOUR 4380 Public Relations Writing
Prerequisite: JOUR 2350. 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. Dual-listed in the ULALR Graduate Catalog as JOUR 5380. Three credit hours.

JOUR 4382 Public Relations Case Studies and Campaigns
Prerequisites: ADVT 4310 or consent of instructor. Study of recent public relations cases involving business, industry, institutions and government, with special emphasis on the application of public relations principles introduced in ADVT 4310. Includes student project. Three credit hours.

JOUR 4384 Topics in Journalism
Prerequisite: junior standing or consent of instructor. Advanced and specialized topics in journalism and mass media, especially those of current interest and relevance to journalism professionals. Possible subjects include the following: reporting entertainment news, minority issues in journalism, sports journalism and health, and science and environmental journalism. Classes will provide an in-depth understanding of topics chosen. Refer to the semester schedule for specific topics offered. Dual-listed in the ULALR Graduate Catalog as JOUR 5384. Three credit hours.

JOUR 4189, 4289, 4389 Independent Study
Prerequisites: junior standing, consent of instructor, approval of independent study proposal before registration. Individual in-depth study, research, or designated on-campus practicum related to broadcast journalism, news-editorial, public relations options, or professional and technical writing. Up to three hours may be counted toward the major. One, two, or three credit hours.

JOUR 4390 Mass Communication Internship
Prerequisites: senior standing, consent of school director. Work experiences either in the commercial media under direction of professional journalists or in positions under supervision of public relations specialists. Periodic written and oral reports to the professor coordinating the study. Three credit hours.

JOUR 4391 Mass Communication Cooperative Education
Prerequisites: junior standing, consent of school director and director of cooperative education. Work experiences either in the commercial media under direction of professional journalists or in positions under supervision of public relations specialists. Periodic written and oral reports to the professor coordinating the study. Credit awarded for employment involving at least 20 hours per week and successful completion of specific instructional objectives that provide new learning on the job and in the program major. Students who take this course may not take JOUR 4390. Three credit hours.

JOUR 4392 Computer Assisted Reporting
Prerequisite: JOUR 3320. An introduction to the techniques of computer-assisted reporting and basic spreadsheet analysis using the internet, the World Wide Web, on-line services, and bulletin boards as source material. Emphasis will be on efficient retrieval of information and the practical application in writing in-depth news articles. Three credit hours.

Leisure Science (LESC)

LESC 1100 Team Sports I
Theory and practice needed to understand and develop an appropriate level of skill in flag football and volleyball. One credit hour.

LESC 1101 Team Sports II
Theory and practice needed to understand and develop an appropriate level of skill in basketball and softball. One credit hour.

LESC 1102 Sports Officiating
Emphasis is placed on developing the mechanics of signals, rules, and regulations to successfully officiate football, basketball, baseball, and softball. Practical applications of signals, rules, and regulations will be applied by the actual officiating of games. One credit hour.

LESC 1103 Beginning Ice Skating
For individuals who do not know how to ice skate. Emphasis on fundamentals, safety, and the basic steps. One credit hour.

LESC 1105 Beginning Swimming
For non-swimmers. Emphasis on fundamentals of swimming and water safety and the basic strokes: front crawl, back crawl, elementary backstroke, and side stroke. One credit hour.

LESC 1106 Scuba Diving
Theory and practice in the skills involved in the safe and effective use of snorkel, fins, face mask, and scuba equipment. Deep water training sessions are required for certification. A fee is charged for use of equipment and expense of deep water training sessions. One credit hour.

LESC 1107 Water Polo
Fundamental knowledge, techniques, and skills necessary to develop an understanding of and ability to play water polo. One credit hour.

LESC 1108 Water Aerobic Exercise
This course incorporates the health-related fitness components of muscular strength, muscular endurance, and cardiovascular endurance in an aquatic environment. Due to increased resistance provided by water overload training, improvement should occur in these areas. Deep water exercises such as water walking and water jogging along with aerobic exercises done to music, combine to make up a stress-free fitness program. The ability to swim is not a prerequisite for water aerobic exercise. One credit hour.

LESC 1109 Racquetball
Emphasis is on developing skills in racquetball, presenting information on equipment safety, preliminaries to the strokes in racquetball, and introduction of the game itself. Practical application will enable the novice to develop both physical and mental skills to achieve in racquetball. One credit hour.

LESC 1111 Restrictive Activity
Designed for men and women who are physically unable to participate in other physical education activities. A statement from the family physician is required regarding the nature of the physical problem. One credit hour.

LESC 1112 Judo
Theory and practice of fundamentals of judo. Emphasis on the development of skills, rules, regulations, and necessary equipment. One credit hour.

LESC 1113 Karate
Theory and practice of fundamentals of karate. Emphasis on the development of skills, rules, regulations, and necessary equipment. One credit hour.

LESC 1114 Self-Defense
Fundamentals of self-defense designed for the individual interested in studying the scientific principles of gravity and body control over opposing forces as a self-protective device. One credit hour.

LESC 1115 Hunter Safety
A basic course in the principles of safe hunting. Qualifies students over 21 years of age for an Arkansas Game and Fish Commission Certificate as a Hunter Safety Instructor. One credit hour.

LESC 1116 Beginning Tennis
Emphasis on rules, scoring, selection of racket, grip, footwork, and body positioning. Also emphasizes forehand, backhand, serve, net volley, lob, fundamental strategy, and techniques of singles and doubles play. One credit hour.

LESC 1117 Beginning Golf
Theory and practice of fundamental skills and techniques of golf. Emphasis on rules and etiquette, use of one wood and three irons, grip, stance, backswing, head position, follow-through, approach shots, full strokes, and putting. A fee is charged. Held off campus. One credit hour.

LESC 1118 Beginning Badminton
Theory and practice of fundamental skills and techniques of badminton. Emphasis on stroke perfection and on strategy and techniques of singles and doubles play. One credit hour.

LESC 1119 Beginning Bowling
Theory and practice of fundamentals of bowling. Emphasis on four-step approach, consistency, body position, release, spot bowling, follow-through, timing, rebound, scoring, rules, and bowling etiquette. A fee is charged. Held off campus. One credit hour.
LESC 1120 Beginning Horseback Riding
Fundamental knowledge, techniques, and skills needed to develop appropriate skill. Emphasis on care of and adjustment to the horse and safety in riding. The walk, trot, canter, and introduction of jumping will also be emphasized. A fee is charged. Held off campus. One credit hour.

LESC 1121 Fencing I Beginning
An introduction to foil fencing. Designed to provide a sound basic understanding of the history, rules, etiquette, and safety aspects of the sport of fencing. Develops basic technical and tactical skills needed for novice-level competition through emphasis on basic offense and defense, continuation of attack, compound attacks, and practical sparring. One credit hour.

LESC 1122 Tumbling
This course includes the theory and practice for conditioning and developing basic skills in tumbling. Intermediate skills will be introduced during the latter half of the semester. Development of strength and flexibility is emphasized. One credit hour.

LESC 1123 Body Mechanics and Conditioning
Emphasis on self-improvement in fitness, conditioning, nutrition, strength development, weight loss or gain, efficient body mechanics, posture, and decreasing or increasing body measurements. One credit hour.

LESC 1124 Stretch/Stress Program
Emphasis is placed on a series of relaxing and effective stretches to help relieve tension, increase flexibility, and range of motion. The stress reduction section provides techniques to help relieve stress and tension. One credit hour.

LESC 1125 Lifetime Fitness
Emphasis is placed on developing an individual lifetime program to improve the health-related components of fitness and wellness. Practical application of principles of exercise and the science of nutrition will be major components in achieving and maintaining ideal body weight. One credit hour.

LESC 1126 Walking to Fitness
Emphasis is placed on developing an individual level of walking performance. Practical applications of principles of exercise and the components of an effective cardiovascular workout are used in achieving fitness through a walking program. One credit hour.

LESC 1128 Weight Lifting/Training
An introduction to the fundamentals of weight lifting applicable to the development of muscular strength and endurance. Principles of exercise, body composition goals, lift techniques, safety instruction, and flexibility maintenance are emphasized. One credit hour.

LESC 1131 Aikido
Theory and practice of fundamentals of Aikido. Concentration will be on the development of skills, rules, regulations, and necessary equipment. One credit hour.

LESC 2103 Intermediate Ice Skating
Review of material in LESC 1103. New material includes: back crossover, T stop, back crossover in a figure eight pattern, fast forward crossover, three turns, and T take off; review of door carries, forced outside and inside edges, open Mohawk turn, one foot snow plow, hockey stop, spin, and bunny hop. One credit hour.

LESC 2105 Intermediate Swimming
Prerequisite: LESC 1105 or equivalent. Review of three basic strokes: front crawl, back crawl, and elementary backstroke. Coordinated stroking in side strokes, breaststroke, inverted breaststroke. Development of strong isolated arm strokes and leg kicks, safety and survival skills, simple diving, simple rescue skills, artificial respiration, and distance swimming. One credit hour.

LESC 2116 Intermediate Tennis
Prerequisite: LESC 1116 or equivalent. Review of rules and scoring, selection of racket, grip, footwork and body positioning, forehand, backhand, serve and volley strokes, and game strategy. Developing the approach shot, lob, and overhead, and strengthening the volley and serve. Analysis of singles and doubles play strategy. One credit hour.

LESC 2117 Intermediate Golf
Prerequisite: LESC 1117 or equivalent. Review of the game of golf: rules, etiquette, selection of clubs, grip, stance, backswing, head position, follow-through, approach shots, full strokes, and putting. Appropriate use of one, three, and five woods and two, three, four, and nine irons. Irons: short approach shots, high loft, distance shots; woods: driver and use on fairway; putting: playing from rough hillside lies and sand traps. A fee is charged. Held off campus. One credit hour.

LESC 2119 Intermediate Bowling
Prerequisite: LESC 1119 or equivalent. Review of scoring rules, bowling etiquette, fundamentals, consistency, four-step approach, body position, aiming, back swing, release, follow-through, and rebound. Analysis of three-, four-, and five-step approaches, natural hook, severe hook, backup, and straight release; theories of aiming and principles of motion as they apply to bowling. A fee is charged. Held off campus. One credit hour.

LESC 2120 Intermediate Horseback Riding
Prerequisite: LESC 1120 or equivalent. Review of effectiveness of leg control, balance of rider’s body, hands, and legs. Introduction to basic and cross-country course. A fee is charged. Held off campus. One credit hour.

LESC 2121 Fencing II Intermediate
An intermediate course designed to improve technical and tactical skills in the use of the foil. Intensive review of Fencing I, attacks on the blade, compound attacks, defense against compound attacks, tactics, defense, rules, and officiating; individual lessons, practice sparring, and class competition. One credit hour.

LESC 2122 Intermediate Gymnastics
Prerequisite: LESC 1122 or equivalent. Review of conditioning, basic skills in tumbling, and the vault. Free exercise routines, balance beam, and uneven bars for women; pommel horse, still rings, horizontal bar, and parallel bars for men. Introduction to composition of gymnastic routines. Strength and flexibility are emphasized. Students will perform required skills and routines and create routines. One credit hour.

LESC 2123 Body Mechanics II
Methods and techniques of developing strength, flexibility, and cardiovascular fitness using aerobic and self-improvement exercises. Conditioning will start slowly and progress to desirable levels of stress. One credit hour.

LESC 3103 Advanced Ice Skating
Review of material covered in LESC 2103. New material includes: squat and shoot-the-duck, review edges, layover step, layover return, spinning, forward pivots, two-foot spins, half Mapes jumps, outside forward rolls, and spirals. One credit hour.

LESC 3105 Advanced Swimming
Prerequisite: LESC 2105 or equivalent. Review of coordinated strokes, side strokes, breaststroke, butterfly, and inverted breaststroke. Continued development of isolated arm strokes and leg kicks, safety and survival skills, rescue skills, and artificial respiration. Emphasis on coordinated strokes for extended distances, trudgen and trudgen crawl, floating and survival skills, surface diving, and underwater swimming and diving. One credit hour.

LESC 3106 Advanced Scuba Diving
Review of basic scuba techniques and safety procedures. Emphasis on water diving experience: safe diving procedures, limited visibility diving, light salvage and recovery diving, and deep and decompression diving. Advanced National Association of Underwater Instructors open water certification course. One credit hour.

LESC 3116 Advanced Tennis
Prerequisite: LESC 2116 or equivalent. Review of tennis fundamentals. Continued development of all strokes. Emphasis on development of serve, greater force and addition of spins, overhead smash, different types of lobs, different types of volleys, ground stroke, slice, and chop. Concentration on skill development in singles and doubles play and practice in tennis officiating. One credit hour.

LESC 3117 Advanced Golf
Prerequisite: LESC 2117 or equivalent. Review of golf fundamentals. Emphasis on development of approach shots, full shots with a club, and playing difficult lies, with concentration on improving putting skills. A fee is charged. Held off campus. One credit hour.

LESC 3119 Advanced Bowling
Prerequisite: LESC 2119 or equivalent. Review of bowling fundamentals. Emphasis on developing skill using a natural or severe hook. Concentration on body mechanics and principles of motion. A fee is charged. Held off campus. One credit hour.

LESC 3120 Advanced Horseback Riding
Prerequisite: LESC 2120 or equivalent. Emphasis on fine qualities of gait; cause and solution to resistance problems; introduction to hunt seat; false and counter leads; cross-country and jumping tests; and understanding the health of the horse. A fee is charged. Held off campus. One credit hour.

LESC 4105 Lifeguard Training
Prerequisite: student must be able to swim 500 yards continuously. This is a course which will provide instruction of skills necessary for lifeguarding, CPR, and first aid training which will lead to Red Cross Lifeguard Certification. One credit hour.

LESC 4205 Water Safety Instructor
Prerequisites: LESC 4105, American National Red Cross water safety instructor’s certification. Methods and techniques of teaching swimming. Two hours lecture, two hours laboratory. Two credit hours.
Liberal Studies (LIST)

LIST 3310 Reasoning Across the Disciplines
Students will study interdisciplinary processes and concerns that apply to the liberal arts, including reading and thinking critically, making effective arguments, exploring research techniques, and writing effectively. Three credit hours.

LIST 4310 Liberal Arts Colloquium
A capstone course. Students will employ interdisciplinary methodology and critical thinking skills to examine and evaluate an interdisciplinary topic. The development and presentation of an interdisciplinary thesis/project will also be required. Three credit hours.

Management (MGMT)

MGMT 1300 Introduction to Business
A survey of business organization and operation, the various fields of business, basic business problems and procedures, the vocabulary of business, and the opportunities open to college graduates in business. Not open to junior and senior majors within the college. Three credit hours.

MGMT 1310 Fundamentals of Information Technology
An introduction to computer information system concepts and the components and capabilities of a computer system. Emphasis on the development of spreadsheet and word processing competencies. Three credit hours.

MGMT 1350 Beginning Keyboarding Applications
Techniques of touch typewriting, skill building, and the production of letters, tables, and manuscripts. For beginning typists and typists with speeds of less than 30 words per minute. Three credit hours.

MGMT 1351 Advanced Keyboarding Applications
Prerequisite: MGMT 1350 or one year of high school typewriting. The development of typewriting skill, accuracy, and speed in producing marketable business letters, reports, forms, memoranda, and manuscripts. Three credit hours.

MGMT 2300 Supervisory Management
The supervisor and his or her relations with subordinates, superiors, colleagues, unions, and society. Emphasis on managerial aspects common to all supervisory positions, regardless of the technical specialty involved or the nature of the organization. Three credit hours.

MGMT 2320 Business Communication Skills
Basic principles of effective language usage in written business communication. Three credit hours.

MGMT 2335 Principles of Word Processing
Prerequisite: MGMT 1350 or one year of high school typewriting. Introduction to word and information processing concepts. Includes the fundamentals of word processor/microcomputer operations, hands-on experience with electronic keyboards and use of number pad for data entry, and a study of word processing applications in business. Three credit hours.

MGMT 3300 Organizational Behavior and Management
Organizational theory, concepts, principles, behavior, and practices in operating an organization. Internal and external forces, planning, decision and control processes, motivation, formal and informal structure, productivity, and leadership. Three credit hours.

MGMT 3302 Organizational Theory
Prerequisite: MGMT 3300. Study of organizations including system and subsystem designs and their interaction with the external environment. Emphasis on contingency views of organization and management. Three credit hours.

MGMT 3304 Production/Operations Management
Prerequisites: ECON 2312. Factors and variables that influence production/operations decisions. Topics will be selected from quantitative techniques such as PERT/CPM, forecasting, linear programming, transportation and assignment, quality control, learning curves, scheduling and planning, inventory control, and modeling. Three credit hours.

MGMT 3305 Management Information Systems
Prerequisites: MGMT 1310 or equivalent. An introduction to the impact of computer-based automation systems on the management of organizations with emphasis on information-processing systems as a tool for management of organizations. This course requires that students learn to use software and hardware to facilitate managerial decision making, planning, and control. Three credit hours.

MGMT 3306 Quality Assurance and Improvement
Prerequisite: ECON 2312. Quality control techniques, standards, and policies for production and operations environments; role of purchasing agent and engineer in specifying and insuring standards for purchased components; design and development of quality control and quality assurance systems throughout the organization. Three credit hours.

MGMT 3307 Systems Development Methodologies
Prerequisite: MGMT 1310. Methods and tools of systems development. The system development life cycle will be studied using traditional and nontraditional techniques (e.g., CASE tools, 4GLs, and expert systems). Also addressed will be data structure, data definition, data normalization, and data modeling. Three credit hours.

MGMT 3310 Business Applications in COBOL
Prerequisite: MGMT 1310 or equivalent. A beginning business computer problem-solving and programming course using the COBOL language. Three credit hours.

MGMT 3315 Operations Research
Prerequisite: ECON 2312. An introductory course in basic mathematical techniques used to define and understand related variables in business and organizational problems. Includes techniques such as simulation, model building, queuing, and decision theory. Three credit hours.

MGMT 3320 Human Resources Management
The principles of planning, directing, and controlling the personnel function. Emphasis on the effective implementation of a comprehensive personnel program, including the recruitment, development, evaluation, and motivation of employees. Three credit hours.
MGMT 3300 Applied Organizational Behavior
Prerequisite: MGMT 3300 or equivalent. A study and integration of basic managerial concepts and behavioral sciences as they affect people in organizations. Emphasis on environmental and interorganizational forces that influence membership behavior. Three credit hours.

MGMT 3522 Advanced Personal Computer Applications
Prerequisites: MGMT 1310 or CPSC 1370. Software applications integrating the use of spreadsheet, word processing, graphics, and e-mail software and front-end design tools. Emphasis on installation, customization, and documentation of personal computer systems. Three credit hours.

MGMT 3562 Small Business Management
Prerequisites: ACCT 2330, MGMT 3300, MKTG 3350 or consent of instructor. The operation of a successful small business including feasibility studies for expansion/growth, business plans, strategic management, marketing, financing, and human resource considerations. Three credit hours.

MGMT 3564 Family Business Management
Prerequisite: MGMT 3300. Management of family firm issues such as the interaction of family members, business objectives versus family objectives, succession planning, management development, motivation, and estate planning. Emphasis on the transition from personal management practices to professional management practices.

MGMT 3655 Small Business Consulting
Prerequisite: MGMT 3362. Teams of students consult with local small businesses recommended by the Small Business Development Center. Students work on problems in accounting, production, marketing, personnel, finance, insurance, law, and information systems. Student teams write reports outlining the problems and recommended solutions.

MGMT 3830 Business Communication
Theories and techniques applicable to internal and external business communication, including composition of letters, memos, and reports. Emphasis on interpersonal communication theory and oral communication skills for business. Three credit hours.

MGMT 3892 Cooperative Education I
Prerequisite: consent of faculty sponsor and department chair prior to enrolling in the course. Provides experience in an organizational setting designed to integrate theory and practice. Course is offered on a credit/no credit basis only, with credit being equivalent to C or greater performance. Three credit hours.

MGMT 4100, 4300 Independent Study
Prerequisites: senior standing, management major with a minimum GPA of 3.00, consent of instructor. Individual study in the application of sound management principles to the solution of business problems. One or three credit hours.

MGMT 4301 Administrative Office Management
Managerial aspects of office systems, incorporating the management of office technologies and facilities; the impact of automation and technology on the office worker; human resource management-staffing, job analysis and design, salary administration, and performance appraisal; control of office resources; and current issues in office systems management. Three credit hours.

MGMT 4302 Office Personnel Development
Learning theories and the application of those theories by office managers in their training of subordinates for the performance of specific tasks-particularly tasks involving the use of office technology. Three credit hours.

MGMT 4303 Teaching Business Education
Methods of teaching business subjects, concentrating on teaching methods and techniques, materials of instruction, media, assessment, and school-community relations. Emphasis on classroom presentations, managing group activities, and business program design. Three credit hours.

MGMT 4304 Production/Operations Management II
Prerequisite: MGMT 3304. A continuation of topics similar to those presented in MGMT 3304. Topics chosen from simulation, waiting lines, scheduling, inventory systems, facility layout, motion and time studies, aggregate planning and modeling, as they relate to production/service organizations. Three credit hours.

MGMT 4309 Seminar: Special Topics in CIS/MIS
Prerequisite: MGMT 3305. Topics especially relevant to Management Information Systems professionals will be offered on an elective basis. Such topics include, but are not limited to data communication, expert systems, and decision support systems. Three credit hours.

MGMT 4310 Local Area Networks
Prerequisite: junior standing or consent of instructor. A study of the role of telecommunications in information resource management, with emphasis on business applications in a local area network environment. Principles of LAN design and installation, system component selection, administration, security, and control. Overview of major LAN systems. Dual-listed in the UALR Graduate Catalog as MGMT 5310. Three credit hours.

MGMT 4311 Advanced Network Technologies
Prerequisite: MGMT 4310 or consent of the instructor. Advanced study of the role of computer networks in information resource management, with emphasis on current business applications in local and wide area network environments. Develops technical and critical thinking skills in a hands-on environment. Three credit hours.

MGMT 4312 Object-Oriented Programming
Beginning object-oriented programming course. Focuses on business problem solving and solution development. Three credit hours.

MGMT 4330 Inventory and Logistics Management
Prerequisite: ECON 2512. The role of inventory in management planning and control, including forecasting, economic lot size, materials control, aggregate inventory, the control process, and material requirements planning. This course is suitable as preparation for the inventory module of the CPIM examination and the logistics module of the CIRM certification. Three credit hours.

MGMT 4331 Management of Information Resources
Prerequisite: MGMT 3305 or consent of instructor. Addresses the role of information and of the chief information officer-decisional, interpersonal, and informational roles; issues regarding organizational strategy and information management addressed within three frameworks: centralized information system, decentralized, and combination; and issues concerning the operational activities within the information system. Three credit hours.

MGMT 4341 Labor and Industrial Relations
The industrial relations system and environment, including legal and economic constraints on participants in the bargaining process. Emphasis on collective bargaining as a power relationship in a conflict situation. Three credit hours.

MGMT 4342 Negotiation and Administration of Collective Bargaining Agreements
Lecture and extensive use of case studies to develop the strategy and tactics of contract negotiation, administration, and interpretation. Emphasis on the grievance procedure and arbitration process. Three credit hours.

MGMT 4350 Business Database Management Systems
Addresses the concepts and principles underlying the design and application of relational database management systems. The course provides an in-depth study of database sets, data models, data dictionary, 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 used to reinforce most of the concepts. Dual-listed in the UALR Graduate Catalog as MGMT 5539. Three credit hours.

MGMT 4355 Information Systems Development Project
Prerequisites: MGMT 3352 and 4350. Emphasis on development of an information systems project through the use of the life cycle methodology and tools developed in previous courses. The class forms project teams; accepts development assignments; and follows the life cycle process to produce specifications for a component system, to devise a logical design for a new system, and to develop a physical design for a new system. Three credit hours.

MGMT 4360 Compensation Management
Prerequisite: MGMT 3360. Administration of the total compensation program as a tool of management, including the use of job descriptions, job analysis and evaluation, and other necessary considerations in initiating and executing wage and salary administration. Three credit hours.

MGMT 4361 Entrepreneurship
Prerequisites: ACCT 2330, MGMT 3300, MKTG 3350, or consent of instructor. The role of the entrepreneur in new venture development. Identifying, assessing, and developing entrepreneurs. Three credit hours. Dual-listed in the UALR Graduate Catalog as MGMT 5361. Three credit hours.

MGMT 4363 Financing Entrepreneurial Ventures
Prerequisites: FINC 3510 and MGMT 3300. Financing alternatives for new and growing ventures; debt financing from investment banks, commercial banks, and Stocks. Equity financing from angel investors, private placements, venture capitalists, and public equity markets. Use of firm valuation methods and calculation of return to investors to create a capital plan for a growing enterprise.

MGMT 4370 Government and Business
Prerequisite: ECON 2322 or 2323. The philosophical and historical background of governmental intervention in the private sector of the economy. Principles of competition and monopoly; federal and state regulation; and business ethics. Three credit hours.

MGMT 4372 Construction Business Management
Surveys organizational and management topics from the perspectives of the construction industry. Missions, goals and objectives, strategies, and organizational structures are reviewed. Business plans are developed along with practice in using decision models. Total quality management is reviewed along with training plans. Also covered are external relations to regulation, unions, communities, suppliers, and customers. Three credit hours.

MGMT 4377 International Business Management
Prerequisite: MGMT 3300 or consent of the instructor. Key objectives are to define and evaluate the field of international business, to analyze the international operating context, and to discuss the management of key functional activities in firms operating in global markets. Major topics include the nature of international business; economic theory and international business operations; international systems and institutions and the analysis of key dimensions of the overseas operating environment. The management of the primary functional activities in international firms emphasized, with the focus on strategies, tactics, and structures for dealing with the special problems and challenges arising in global markets. Three credit hours.
MGMT 4378 Global Operations Management
Prerequisites: MGMT 3304 or senior standing and consent of the instructor. Focuses on managing manufacturing and service operations across national boundaries to provide an organization with a competitive advantage. Emphasis on strategic benefits of globalization through coordinated operations located in different countries and mastering both technological and social/cultural obstacles. Students analyze a series of cases that address the unique issues of global operations management. Three credit hours.

MGMT 4380 Business Strategy and Policy
Prerequisites: MGMT 3130 and 3300, RHET 3316, ECON 2312, FINC 3310, MKTG 3350. Integration of business concepts and techniques and their application to the development of corporate strategy and strategic planning by senior corporate executives. Includes setting objectives, developing business purposes, determining opportunities and threats, and implementing decision and control systems across functional areas. Three credit hours.

MGMT 4385 Special Topics in Management
Topics of current relevance to management professionals. Three credit hours.

MGMT 4391 Employment Law
An examination of legal problems involving employment discrimination based on race, color, religion, sex, national origin, or age. Examines the impact of developing principles of employment law on pre-employment inquiries and testing, seniority and promotions, and other personnel policies, practices, and procedures; affirmative action requirements; state and federal law used to resolve employment discrimination claims; the procedural framework for raising and adjudicating such claims before administrative agencies and the courts; requirements of the Fair Labor Standards Act, Equal Pay Act, ERISA, Worker’s Compensation, and OSHA; and current issues such as sexual harassment and employee dismissal. Three credit hours.

MGMT 4393 Cooperative Education II
Prerequisites: MGMT 3392 and consent of instructor and department chair prior to enrolling in the course. Provides experience in an organizational setting designed to integrate theory and practice. Course is offered on a credit/no credit basis only, with credit being equivalent to C or greater performance. Three credit hours.

MGMT 4394 Internship
Prerequisites: at least 90 semester hours earned with a minimum overall grade point average of 3.0 or department approval; a minimum of 12 semester hours of upper-level management courses completed; consent of instructor and department chair. Practical experience in an organizational setting designed to integrate management theory and applications. A written report is required. Course is offered on a credit/no credit basis only, with credit being equivalent to C or greater performance. Three credit hours.

Marketing (MKTG)

MKTG 2380 Legal Environment of Business
Introduction to the American legal system. Provides a background of the legal environment as it pertains to profit and nonprofit organizations, along with ethical considerations and social and political influences as they affect such organizations. Three credit hours.

MKTG 3350 Principles of Marketing
Prerequisite: junior standing. Introduction to the structure and functions of the marketing system of the economy and to marketing practices of organizations. Includes examination of the environments of marketing decision making, marketing institutions and agencies, and marketing practices of organizations. Three credit hours.

MKTG 3351 Sales Operations
Prerequisite: junior standing. An examination of the requirements and responsibilities of professional sales representatives, including knowledge and skill requirements, market development, preparation, effective sales communications, and customer relations. Three credit hours.

MKTG 3352 Seminar in Current Topics
Prerequisite: 54 or more credit hours. Topics of current interest and importance in marketing and advertising/public relations. Three credit hours.

MKTG 3361 Physical Distribution
Prerequisite: MKTG 3350. Examines the marketing and cost-saving opportunities in the physical movement of goods between supplier, manufacturer, and consumer. Specific functions such as transportation, warehousing, packaging, material handling, order processing, and others will be studied and integrated into various distribution strategies. Three credit hours.

MKTG 3370 Principles of Retailing
Prerequisites: MKTG 3350. Principles of retail store management, including competition, trade area and location analysis, merchandising and inventory control, store layout, promotion, managing employees, and customer service. Three credit hours.

MKTG 3381 Advanced Business Law
Prerequisite: MKTG 2380. A comprehensive overview of business law including the law of contracts, commercial paper, bankruptcy, agency, organizations, sales, property, securities, and other topics of interest to business students and particularly to those majoring in accounting who intend to take the CPA exam. This course does not apply toward the marketing elective requirement. Three credit hours.

MKTG 3385 Consumer Analysis and Behavior
Prerequisites: PSYC 2300, MKTG 3350. An analysis of the personal, environmental, and interpersonal forces affecting consumer decisions and of their implications for marketing strategy development. Three credit hours.

MKTG 4199 Honors Seminar in Marketing
Prerequisites: senior standing, consent of department chairperson. Accelerated seminar on the latest developments in marketing strategy and marketing management, team taught by the departmental faculty. Students will prepare and present an honors paper. One credit hour.

MKTG 4310 Marketing Research
Prerequisite: MKTG 3350 or consent of instructor. A study of the development and use of information for marketing decision making; research methods applied to problems of market segmentation, pricing, distribution, promotional strategy, and development of marketing strategies. Three credit hours.

MKTG 4320 International Marketing
Prerequisite: MKTG 3350. Introduction to the major dimensions of the international marketing environment. Study of planning for and managing international marketing operations. The focus is on strategies, procedures and structures for dealing with the particular problems and challenges arising in the international marketing process. Three credit hours.

MKTG 4330 Services Marketing
Prerequisites: junior standing, MKTG 3350. Examines the major differences between goods and services, as well as the problems associated with these differences. Strategic aspects of the 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. Three credit hours.

MKTG 4350 Sales Management
Prerequisite: MKTG 3350. Administration of the professional sales force. Includes recruitment, selection, training, organization, motivation, compensation, routing and scheduling, and control of sales staff. Three credit hours.

MKTG 4360 Purchasing
Prerequisite: MKTG 3350. Management of materials acquisition and control as it relates to the engineering, production, marketing, and finance functions of the organization. Three credit hours.

MKTG 4370 Business-to-Business Marketing
Prerequisite: MKTG 3350. Cases and concepts of marketing products from one business to another. This course includes specific strategies and techniques for the development of product policy, pricing, promotion, and distribution of business products. Three credit hours.
MKTG 4378 Real Estate Law
Prerequisite: FINC 3370. An introduction to the nature of real property; ownership rights and estates; descriptions; easements, fixtures, liens, sales, land contracts; mortgage law; deeds and property transfers; cooperatives and condominiums; wills and intestate succession; zoning; and recent developments. This course does not apply toward the marketing elective requirement. Three credit hours.

MKTG 4381 International Business Transactions
Prerequisite: MKTG 2380. The study of international business transactions, with emphasis on national power to regulate trade and the world economy. Legal problems in international transactions, trade contracts, terms of trading, and letters of credit, and economic regulation and extraterritorial laws. Three credit hours.

MKTG 4385 Marketing Management
Prerequisites: senior standing, MKTG 3350. The application of marketing concepts and techniques to the solution of marketing problems, includes product positioning, product and product line, price, channels of distribution, advertising, and personal selling. The case study method is emphasized. Three credit hours.

MKTG 4395 Cooperative Education I
Prerequisites: senior standing, major in marketing or advertising, completion of at least nine hours of upper-level marketing or advertising courses with a grade of C or greater, cumulative GPA of 2.50, and consent of a sponsoring faculty member prior to registration. Designed to complement and extend the classroom learning experience through the application of marketing theories and concepts in a professional work environment. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities are dependent upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is accepted as elective credit in the marketing or advertising/public relations major. Course is offered on a credit/no credit basis only. Three credit hours.

MKTG 4396 Cooperative Education II
Prerequisites: credit for the completion of MKTG 4395 and consent of a sponsoring faculty member prior to registration. Designed as the continuation of MKTG 4395. A written project, designed in consultation with the faculty member, and a minimum of 200 hours with a participating employer during the semester are required. The exact number of weekly work hours, activities, and responsibilities are dependent upon the nature of the work experience and must be specified in written agreements between the student, faculty member, and the Office of Cooperative Education. This course is not accepted as elective credit in the marketing or advertising/public relations major. Course is offered on a credit/no credit basis only. Three credit hours.

Mathematics (MATH)

MATH 0300 Elementary Algebra
Basic arithmetic, signed numbers, variables, polynomials, exponents, linear equations in one variable, special formulas, factoring second degree polynomials, graphing equations in two variables, roots and radicals, ratios, proportions, and variation. Note: MATH 0300 will not count for credit toward a degree for any student. Grading for this course will be A, B, C, no credit. Three hours lecture. Three credit hours.

MATH 0301 Intermediate Algebra
Prerequisite: a grade of C or greater in MATH 0300, its equivalent, or suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Fundamental operations with real numbers; linear and quadratic equations; systems of linear equations; inequalities; graphs, logarithms; fractional and negative exponents. Note: MATH 0301 will not count for credit toward a degree for any student. Grading for this course will be A, B, C, no credit. Three or four lecture. Three credit hours.

MATH 1223 Introduction to Mathematics Software
Prerequisites: grades of C or greater in MATH 1302 and 1303, equivalent transfer courses, or a suitable score on a mathematics placement test. Symbolic and numerical computations; Computer Algebra System (CAS); graphing; simple programming; spreadsheet fundamentals and mathematical typesetting. Four hours lab. Two credit hours.

MATH 1302 College Algebra
Prerequisite: a grade of C or greater in MATH 0301, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Relations, functions, graphing, systems of linear equations and inequalities; matrices and determinants, roots of polynomials, logarithmic and exponential functions, sequences, series, mathematical induction and the binomial theorem. Three hours. Three credit hours.

MATH 1303 Trigonometry
Prerequisite: a grade of C or greater in MATH 1302, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Co-requisite with consent of instructor: MATH 1302. Circular functions and their graphs, identities, angles and their measure, functions of angles, right triangles, Law of Sines, Law of Cosines, inverses of circular functions, solutions of trigonometric equations, complex numbers, and DeMoivre’s Theorem. Three hours lecture. Three credit hours.

MATH 1311 Applied Calculus I
Prerequisite: a grade of C or greater in MATH 1302, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Not intended for mathematical science majors or minors. Recommended co-requisite: MATH 1111. Introduction to analytic geometry, differential calculus of algebraic and transcendental functions; applications to curve sketching, maxima-minima and related rate problems, introduction to the integral with applications to area. Three hours lecture. Three credit hours.

MATH 1111 Applied Calculus I Laboratory
Prerequisites or corequisites: MATH 1311 or equivalent. Individual and group projects involving data acquisition using computer interfaced electronic probes and sensors, data analysis and modeling using modern computer algebra systems such as Maple and Mathematica, computer generated lab reports. Two lab hours. One credit hour.

MATH 1312 Applied Calculus II
Prerequisites: grades of C or greater in MATH 1303 and 1311, equivalent transfer courses, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). It is recommended that the lab course 1112 be taken concurrently with this course. Topics covered are differential and integral calculus of algebraic and transcendental functions of one and several variables, differential equations with applications to motion, decay and mixing. Three hours lecture. Three credit hours.

MATH 1112 Applied Calculus II Laboratory
Prerequisites or corequisites: MATH 1312 or equivalent. Individual and group projects involving data acquisition using computer interfaced electronic probes and sensors, data analysis and modeling using modern computer algebra systems such as Maple and Mathematica, computer generated lab reports. Two lab hours. One credit hour.

MATH 1315 College Mathematics
Prerequisite: a grade of C or greater in MATH 0303, the equivalent, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Functions, analytic geometry, formulas and variation; set theory; logic; probability and statistics, combinatorics, populations, samples, normal distribution, mean, variance, and standard deviation. Note: This course satisfies the state mandated requirement for the baccalaureate degree. Three credit hours.

MATH 1342 Business Calculus
Prerequisite: a grade of C or greater in MATH 1302, an equivalent transfer course, or a suitable score on a mathematics placement test (See “Mathematics Placement Tests” on page 177). Differential and integral calculus with applications to economics and management sciences. Three hours lecture. Three credit hours.
MATH 1451 Calculus I
Prerequisites: grades of C or greater in MATH 1302 and 1303, equivalent transfer courses, or a suitable score on a mathematics placement test. Limits and limit theorems, continuity, derivatives and the chain rule, implicit differentiation, applications, the definite integral, the Fundamental Theorems of Calculus, and applications of integration. Three hours lecture. Two hours lab. Four credit hours.

MATH 1452 Calculus II
Prerequisite: a grade of C or greater in MATH 1451 or an equivalent transfer course. Integration, the definite and indefinite integrals, L'Hôpital's rule, improper integrals, Taylor polynomials, infinite series, power series, polar coordinates, and conic sections. Three lecture hours and two lab hours. Four credit hours.

MATH 2310 Discrete Mathematics
Prerequisite: a grade of C or greater in MATH 1302. Emphasizes applications of mathematics in computer science and other areas of modern technology. The topics include mathematical reasoning, set theory, proofs by induction, number systems, relations, directed graphs, trees, and related topics of study. Three hours lecture. Three credit hours.

MATH 2453 Calculus III
Prerequisite: MATH 2307, 3312. Three-dimensional analytic geometry, vectors, lines, planes, partial derivatives, multiple integrals, line integrals, and gradient fields. Three lecture hours and two lab hours. Four credit hours.

MATH 3301 Introduction to Topology
Prerequisites: grades of C or greater in MATH 2307, 3312. Topological spaces, metric spaces, sequences, compact and connected sets, continuous functions. Three hours lecture. Three credit hours.

MATH 3310 Algebraic Structures I
Prerequisite: MATH 2310. An introduction to modern algebraic structures. The topics include equivalence relations, groups, isomorphisms, direct products, rings, fields, and integral domains. Three credit hours.

MATH 3311 Number Theory
Prerequisite: a grade of C or greater in MATH 1302. Basic representation, the fundamental theorem of arithmetic, combinatorial and computational number theory, fundamentals of congruences, solving congruences, arithmetic functions, primitive roots, prime numbers, quadratic congruences, additivity. Three hours lecture. Three credit hours.

MATH 3312 Linear Algebra
Prerequisites: grades of C or greater in MATH 1342 or 1312 or 1305: and 2310. Vector spaces, bases, polynomials, Cayley-Hamilton Theorem, invariant subspaces, linear transformations, eigenvalues and eigenvectors, selected applications, Jordan canonical form. Three hours lecture. Three credit hours.

MATH 3322 Introduction to Differential Equations
Prerequisite: a grade of C or greater in MATH 2306. MATH 2306 may be corequisite with consent of instructor. Methods of forming and solving some important types of ordinary differential equations and their application to selected physical and biological models. Three hours lecture. Three credit hours.

MATH 3324 Mathematical Models
Prerequisites: grades of C or greater in MATH 2307, 3312, STAT 3350. A study of selected topics from the physical and biological sciences demonstrating the interaction between model building and mathematical systems. Three hours lecture. Three credit hours.

MATH 3325 Mathematics of Optimization
Prerequisites: grades of C or greater in MATH 2307, 3312, STAT 3350. Linear programming, Simplex and revised Simplex algorithms, Transportation problems, networks and flows, games and decisions. Three hours lecture. Three credit hours.

MATH 3330 College Geometry I
Prerequisite: a grade of C or greater in MATH 1304. A survey of secondary school geometry, the axiomatic method; Euclidean geometry; an introduction to non-Euclidean geometry. Three hours lecture. Three credit hours.

MATH 4100, 4200, 4300 Independent Study
Prerequisites: consent of department chairperson and supervising faculty member. Studies of assigned topics chosen to develop investigative, analytical, research, or professional skills related to mathematics, culminating in a written paper. Three hours lecture. One, two, or three credit hours.

MATH 4301 Analysis I
Prerequisites: grades of C or greater in MATH 2307, 3312. Real number system, Euclidean n-space, complex numbers, topology of real and complex Euclidean spaces, continuous functions, pointwise and uniform convergence, power series, the derivative, and the integral. Dual-listed in the UALR Graduate Catalog as MATH 3301. Three hours lecture. Three credit hours.

MATH 4302 Complex Analysis
Prerequisite: grade of C or greater in MATH 4303 or consent of instructor. Algebra of complex numbers, analytic functions, integration, power series, Laurent series, and elementary conformal mappings. Dual-listed in the UALR Graduate Catalog as MATH 5302. Three hours lecture. Three credit hours.

MATH 4303 Advanced Calculus I
Prerequisites: MATH 2307, 3312. The real number system, sequences, limits, continuity, metric spaces, convexity, derivatives, linear analysis, and integration. Dual-listed in the UALR Graduate Catalog as MATH 5303. Three credit hours.

MATH 4304 Advanced Calculus II
Prerequisite: MATH 4303. Functions of several variables, implicit function theorem, geometry of curves and surfaces, differential forms, Stoke's theorem and Green's theorem. Dual-listed in the UALR Graduate Catalog as MATH 5304. Three hours lecture. Three credit hours.

MATH 4308 Integral Transform Theory
Prerequisite: MATH 3322. Review of linear differential equations. The Laplace transform, functions of a complex variable, integration by the method of residues, the Laplace transform inversion integral. The Z-transform, the Z-transform inversion integral, difference equations, Fourier series, and the Fourier transform. Dual-listed in the UALR Graduate Catalog as MATH 5308. Three credit hours.

MATH 4310 Algebraic Structures II
Prerequisite: MATH 3310. Continues the topics of Algebraic Structures I into more advanced topics of modern algebra including factor groups, polynomial rings, quotient rings, and extension fields. Three credit hours.

MATH 4323 Numerical Analysis
Prerequisites: grades of C or greater in MATH 2307, 3312, or equivalent courses; knowledge of a scientific programming language. Error analysis, fixed points and roots, interpolation, approximations, numerical differentiation and integration, linear systems, differential equations. Dual-listed in the UALR Graduate Catalog as MATH 5323. Three hours lecture. Three credit hours.

MATH 4331 College Geometry II
Prerequisite: MATH 3330. A rigorous development of Euclidean geometry. Three hours lecture. Three credit hours.

MATH 4361 History of Mathematics I
Prerequisite: grade of C or greater in MATH 1452. This course will provide an overview of aspects of the history of mathematics from the Early Beginnings (before the sixth century B.C.), Classical Period (sixth century B.C. to fifth century), and Medieval and Renaissance Periods (sixth century to sixteenth century). This survey course discusses a broad range of the history of mathematics including a variety of topics over many consecutive time periods, and is organized so that there is more discussion than lecture. The course will consider both the growth of mathematical ideas and the context in which these ideas developed, in various civilizations around the world. Attention will be paid to how the history of mathematics or mathematical ideas is important in the teaching of these ideas in both secondary school and college. Three credit hours.

MATH 4362 History of Mathematics II
Prerequisite: grade of C or greater in MATH 1452. This course will provide an overview of aspects of the history of mathematics from the Early Modern Period (seventeenth and eighteenth centuries) and the Modern Period (nineteenth and twentieth centuries). This survey course discusses a broad range of the history of mathematics including a variety of topics over many consecutive time periods, and is organized so that there is more discussion than lecture. The course will consider both the growth of mathematical ideas and the context in which these ideas developed in various civilizations around the world. Attention will be paid to how the history of mathematics or mathematical ideas is important to the teaching of these ideas in both secondary school and college. Three credit hours.

MATH 4390 Senior Seminar
Prerequisites: senior standing and major status in the Department of Mathematics and Statistics. Students in the course prepare and present senior projects and portfolios and take the mathematics exit exam. This course is offered in the spring semester only and is to be taken by mathematics majors planning to graduate in the spring or the following fall. One hour. One credit hour.

MATH 4199-4399 Selected Topics
Prerequisite: consent of instructor. The content of this course changes on demand. For descriptive title of the content refer to the semester schedule. Dual-listed in the UALR Graduate Catalog at the 5000-level. One hour lecture for each hour credit. One, two, or three credit hours.
Mathematics Education (MATH)

The following courses are designed for the prospective early childhood, middle childhood, or secondary education teacher and cannot be used as part of the undergraduate major or minor in mathematics. For the courses appropriate to teacher licensure, contact the Department of Teacher Education.

MATH 3380 Mathematics I for Early Childhood
Prerequisites: admission to the early childhood/middle childhood education program and a grade of C or greater in MATH 1302 or 1315. Problem solving, sets, system of whole numbers, system of integers, system of rational numbers, number theory, graphing, proportional reasoning, technology, and historical developments in mathematics. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 3382 Mathematics II for Early Childhood
Prerequisites: admission to the early childhood education program and successful completion (C or greater) of MATH 3380. Second mathematics education course for early childhood education majors (no emphasis in mathematics). Problem-solving, estimation, number sense, development of computational algorithms, mental computation techniques, measurement of two- and three-dimensional objects, geometry, probability, data collection and analysis, technology, proportional reasoning, and historical developments in mathematics. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 3383 Mathematics for Middle School
Prerequisites: admission to the middle childhood education program (mathematics/science specialty) and a grade of C or greater in MATH 1302. First mathematics course specifically for middle childhood education (mathematics/science specialty) majors. Problem solving; sets; number systems including whole numbers, integers, rational numbers, and real numbers; number theory; algebra; graphing; matrices; proportional reasoning; technology; and historical developments in mathematics. The course includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 3384 Concepts in Geometry
Prerequisites: admission to the middle childhood education program and a grade of C or greater in MATH 3383 or MATH 3380. Problem solving, logic and sets, proofs, geometry as an axiomatic system, geometric figures in two and three dimensions, systems of measurement, congruence and similarity, geometry using coordinates, geometry using transformations, proportional reasoning, modeling real-world situations using geometry, networks, technology, and historical developments in geometry. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 4380 Concepts in Probability and Statistics
Prerequisites: admission to the middle childhood education program and a grade of C or greater in MATH 3380 or MATH 3383. Problem solving, organizing data, averages and variation, regression and correlation, probability theory, normal distributions, sampling distributions, estimation, hypothesis testing involving one population about differences, proportional reasoning, and historical developments in probability and statistics. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis throughout the course is on problem solving, reasoning, communication, and connections. Two hours lecture and two hours laboratory. Three credit hours.

MATH 4381 Teaching Mathematics in Secondary School
Prerequisite: admission to the secondary education minor program or consent of the instructor. An overview of methods and materials used to teach secondary mathematics, techniques considered most effective, and appropriate assessment strategies. A link between mathematics content-skills and practical applications for classroom instruction. Includes mathematics content, teaching techniques, mathematics manipulatives, and technology. Emphasis throughout on problem solving (social studies/language arts specialty), or consent of instructor. Applications of technology in the secondary mathematics classroom. An overview of mathematics software appropriate for the secondary mathematics classroom. Emphasis throughout on problem solving, reasoning, communication, and connections. Required for secondary mathematics teacher licensure. Two hours lecture and two hours laboratory. Three credit hours. Spring semester offering

MATH 4383 Technology in Math Education
Prerequisite: admission to the secondary education minor program, MATH 2307 and at least 12 upper-level hours in mathematics, or consent of instructor. Applications of technology in the secondary mathematics classroom. An overview of mathematics software appropriate for the secondary mathematics classroom. Emphasis throughout on problem solving, reasoning, communication, and connections. Required for secondary mathematics teacher licensure. Two hours lecture and two hours laboratory. Three credit hours. Fall semester offering

Middle Childhood Education (MCED)

MCED 3105 Field Experience I
Prerequisite: admission to the middle childhood teacher licensure program. This field experience will acquaint students with a variety of middle school experiences, and provide a 40 hour experience in a middle school classroom. Students will be oriented to the structure of a school district, the school, and the classroom setting. All concurrent courses in the Introduction to the Profession block will include assignments or specific tasks to be completed by students during the 40 hour classroom placement in this field experience. One credit hour.

MCED 3240 Field Experience II
Prerequisite: admission to the middle childhood teacher licensure program and successful completion of MCED 3105. This field experience will focus on working with students in small groups. Students will spend time in a middle school classroom working with students. Students will be expected to complete assignments related to all concurrent courses during the classroom placement. During this field experience students will continue to develop their professional portfolio and community resource file. Three credit hours.

MCED 3301 Middle Childhood Education, Family, and the Community
Prerequisite: admission to the teacher education program. Corequisite: MCED 3105. Students in search of working with families, communities, and student organizations from a middle childhood perspective. Information is provided about the nature, history, and philosophy of middle childhood education; the organization and structure of middle schools; teacher advisory systems; morally responsive teaching; teaching teams; multiculturalism; and diversity. Three credit hours.

MCED 3303 Middle Childhood Curriculum and Planning
Students will be oriented to the scope of the middle grades curriculum, varying patterns of curriculum organization, activities, and transition based teaching and general problem solving in planning and school management. Introduction of the materials and various technology media used in teaching at the middle level. Field based experience required. Three credit hours.

MCED 3310 Middle Level Literacy and Literature
Provides the student with a broad perspective of literature and literacy instruction for middle school students with language as a central focus of study. Emphasis on exploring ways of engaging adolescents in meaningful literacy learning. Specific focus on differentiating instruction and integrating adolescent literature and writing throughout the curriculum. Involves preparation and evaluation of assessment and teaching procedures and strategies and a review of background information related to the reading process. Three credit hours.

MCED 3320 Integrating Curriculum: Language Arts and Social Studies
Prerequisite: admission to the middle childhood education program and completion of HIST1311, 1312; SPCH 1300; HIST 1311, 1312; HIST 2311 or 2312; POLS 1310; a three-hour literature course; a three hour geography course; and completion of the Introduction to the Profession block. This course facilitates the understanding of how to teach social studies and language arts through an integrated approach in the most effective way to children in the middle grades. Instructional techniques that teach students how to involve children in social, interactive learning will be presented. Students will plan for and provide developmentally appropriate hands-on experiences with appropriate materials and the supportive environment necessary for children’s meaningful exploration and discovery and will implement those experiences in a field placement. Students will also be required to conduct assessments of learning. Three credit hours.

MCED 3330 Integrating Curriculum: Science and Mathematics
Prerequisites: admission to the middle childhood education program and completion of eight hours of science and nine hours of mathematics. Corequisite: MCED 3240. Emphasizes integrated mathematics and science content and how to teach this content to middle level children. The student should use the content to develop thematic concepts which are implemented through the methodologies of inquiry based, hands-on learning with the use of manipulatives. Students utilize the internet and technology as an integrative tool to develop pedagogical techniques and materials in relation to whole course design with cross-disciplinary focus and active student involvement. Three credit hours.

MCED 3402 Middle Childhood and Early Adolescent Development and Learning
Prerequisite: admission to the middle childhood education program. Corequisite: MCED 3105. Field Experience I. A study of the hereditary and environmental influences on the cognitive, emotional, physical, sexual, and social development of children from birth through adolescence with a special emphasis on their pre- and early adolescent development. The impact of the broader culture and atypical development will also be part of the course’s focus. Students observe, record, and analyze behavior and development of children in an educational setting. Four credit hours.

MCED 4120 Licensure Seminar
A review of educational psychology, assessment, motivation, and student expectations. Classroom scenarios requiring application of teacher decision-making skills and classroom management strategies will be presented. In addition, students will analyze case studies. Prepares students for the Praxis II examination; in order to pass this seminar, students must attain the standard set by the Arkansas State Board of Education.
MCED 4301 Internship I
Prerequisites: admission to the middle childhood education program and completion of the Introduction to the Profession and Curriculum Applications semesters. Corequisites: MCED 4310 and 4330. Classroom observation and participation in classroom routines with gradual assumption of complete classroom teaching responsibilities. Students plan, teach, and reflect on the total experience. Students make accommodations for children with special needs. All of the school resources are used, and competence in using technology is required. Three credit hours.

MCED 4303 Professional Seminar
Corequisite: MCED 4602. Part of final semester, Professional Practicum II. Presentations by College of Education faculty and practitioners in the field concerning such topics as legal issues affecting educational practice; family constellations; adolescent misbehavior; behavior analysis; discipline involving logical and natural consequences in place of rewards and punishments; and encouragement. Students participate in discussions of these topics, analyze case studies involving preadolescent children, create a professional portfolio, and submit a senior exit project utilizing interactive technology and solving an identified problem in their professional development school. Students learn how to prepare for job interviews; what to expect the first teaching year; how to maintain a professional portfolio to demonstrate growth; how to reflect on personal development; and what is involved in meeting the Arkansas Teacher Licensure Standards. Four credit hours.

MCED 4310 Middle Level Content Literacy
Emphasis on the development of reading in the content areas for middle school students. Focus on the concepts of developing meaningful literacy experiences for adolescents of all ability levels, with a continued focus on language and literature as an integral part of the curriculum. Involves a study of major theories and current teaching strategies in literacy for adolescents. Evaluation and assessment strategies explored. Three credit hours.

MCED 4430 Classroom Management
Emphasizes fundamental principles underlying middle childhood developmental programs in middle level grades, including creation of and fostering of classroom management techniques and strategies for the design of environments which are conducive to a safe place for teaching, learning, and connecting the community to the school for effective discipline and parental support and involvement. Four credit hours.

MCED 4502 Internship II
Prerequisites: admission to the middle childhood education program and the successful completion of Internship I. Corequisite: concurrent enrollment in TCED 4325. The final field placement course. Students plan, teach, and reflect on the experience. Students 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. Five credit hours.

Military Science (MSCI)
MSCI 1101 Leadership
Emphasis on the importance of communication, decision making, and the understanding of human behavior as it affects leadership situations. One hour laboratory per week is required. One credit hour.

MSCI 1102 Leadership II
A continuation of MSCI 1101 which focuses on leadership development and basic tactical skills. One hour laboratory per week required. One credit hour.

MSCI 2304 Introduction to Military Organization/Tactics I
An introduction to the military organization and a study of basic tactics. One hour laboratory per week. Two credit hours.

MSCI 2305 Map Reading
An introductory course studying all aspects of land navigation, including military and topographic maps, aerial photographs, and photomaps. Practical exercises are emphasized. One hour laboratory per week. Three credit hours.

MSCI 3305 Advanced Leadership and Tactics I
An in-depth study of unit tactics and related individual skills, advanced map reading, and their practical application. Emphasis on person-to-person leadership skill development. Two hours laboratory per week. Two credits.

MSCI 3306 Advanced Leadership and Tactics II
A continuation of MSCI 3305. Two hours laboratory per week. Three credit hours.

MSCI 4307 Applied Leadership and Management I
A study of command and staff functions and practical exercises in planning, organizing, and supervising. Students plan and administer all activities of the cadet corps. Emphasis on leadership and management of larger organizations. Two hours laboratory per week. Three credit hours.
Music Performance Studies (MUAP)

MUAP 1000 Recital Attendance
Attendance at concerts, recitals, student convocations, etc., as required by departmental policies.

MUAP 1100 Third-Age Piano Class
Prerequisite: Consent of the instructor. Designed for individuals who are interested in pursuing piano study in a less-formal group setting. Various technical, reading, and harmonyization topics explored for performance of solo and ensemble works. May be repeated for credit. One credit hour.

MUAP 1201 Guitar Reading I
Prerequisite: MUAP 1254 with B or greater or consent of instructor based on audition to demonstrate familiarity with guitar and music fundamentals. Instrumental laboratory for guitarists, emphasizing reading studies in a variety of music styles. Two credit hours.

MUAP 1202 Guitar Reading II
Prerequisite: MUTH 1201 or consent of instructor. A continuation of Guitar Reading I with emphasis on chord chart reading. Comping in various styles will be discussed and more advanced materials will be used to improve simple line reading. Two credit hours.

MUAP 1203 Pop Guitar Class
Designed as an alternative to conventional class guitar, this course teaches theory, technique, and control through the performance of songs in the pop-rock idiom. Class time is divided between the introduction of a concept or technique and its application in the songs provided. The course is open to anyone. Two credit hours.

MUAP 1204 Voice Class I
For beginning voice students. Application of vocal principles to develop singing facility. Group application of proper breathing, phrasing, and general attributes of correct vocal production. Two credit hours.

MUAP 1214 Piano Class I
For beginning piano students with little or no keyboard experience. Basic skills required to play the piano will be addressed in a group setting. Topics explored include piano technique, music reading, basic harmonyization, transposition and theory and keyboard fundamentals. Two credit hours.

MUAP 1244 Voice Class II
Prerequisite: MUTH 1204 or consent of instructor. Group vocal instruction with emphasis on the development of vocal technique and individual performance of art songs. Two credit hours.

MUAP 1264 Piano Class II
Prerequisite: MUTH 1214 or consent of instructor. A continuation of Class Piano I designed to continue development of keyboard facility through technique, sight reading, harmonicization, and a variety of solo and ensemble piano repertoire. Two credit hours.

MUAP 2218 Voice for Musical Theatre
Prerequisite: MUTH 1204 or consent of instructor. A vocal performance class studying the techniques for singing in musical theatre. Staging of individual numbers and audition preparation. Two credit hours.

MUAP 2284 Piano Class III
Prerequisite: MUTH 1264 or consent of instructor. Designed to hone the skills introduced in Piano Class II, with an emphasis on sight reading, playing from lead sheets, and on playing a variety of intermediate solo and ensemble repertoire from various stylistic periods. Two credit hours.

MUAP 2350 Songwriting
Organizational factors needed to identify the components of song form and integrate formal design and enlarged key areas into music. Designed for nonmusic and music majors. Three credit hours.

MUAP 2154, 2254, 2354 Special Topics
Prerequisites: MUTH 1204, 1244; 1214, 1264; or consent of instructor. Class vocal or piano instruction in various forms of musical repertoire and style, such as musical theatre, jazz and pop, or religious solos. One, two, or three credit hours.

MUAP 3224 Conducting I
Prerequisite: MUTH 2381 or consent of instructor. Fundamentals of conducting applicable to both instrumental and choral ensembles; patterns and basic conducting techniques; conducting of musical examples in both genres. Two credit hours.

MUAP 3265 Piano Skills
Prerequisite: MUAP 2284 with a grade of B or higher, and MUTH 2391, or consent of instructor. Beginning with an intensive review of basic functional piano skills, more advanced sight reading at the keyboard, harmonyization skills, improvisation techniques, simple accompaniments, and solo piano repertoire will be explored. Two credit hours.

MUAP 3325 Conducting II
Prerequisite: MUAP 324 or consent of instructor. Conducting techniques relative to both choral and instrumental ensembles, including blend, balance, phrasing, diction, instrumental transposition, expressive devices and basic styles of choral/instrumental music literature; conducting of music examples in both genres. Three credit hours.

Music Education (MUED)

MUED 3232 Early Childhood Music
The emphasis is on activities, creative projects, and developing vocal and instrumental skills useful to the early childhood teacher for both musical and nonmusical integrated classroom activities. Students will develop skills in making lesson plans for musical activities and integrating music with the other arts, other subjects, and other peoples, places, and cultures. Not open to music majors for credit. Three credit hours.

MUED 3302 Piano Pedagogy
Prerequisite: completion of MUPR 2226 jury, and MUHL 2200, or consent of instructor. Study of methods and pedagogical material for piano teachers. Three credit hours.

MUED 3314 Vocal Pedagogy
Study of methods and pedagogical literature for voice teachers. Three credit hours.

MUED 3315 Teaching Choral Music in the Secondary Schools
An examination of materials and methods employed in middle school, junior high, and senior high choral music education. Emphasis on the general music program and nonperformance classes. Additional topics include procedures for administering choral and instrumental programs and scheduling. Three credit hours.

MUED 3322 Music in the Elementary Grades
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. Three credit hours.

MUED 3332 Public School Music for Elementary Teachers
Provides instruction in rudiments of music; gives training in musical activities suitable for children through laboratory, lecture, and participation. Examines methods and materials for successfully teaching music to children in the elementary grades. Not open to music majors for credit. Three credit hours.

MUED 3352 Business of Music
The entire scope of the music industry is presented in a systematic, comprehensive review; from songwriters through publishing and record companies to television and radio. Three credit hours.

MUED 4352 Piano Practicum
Prerequisite: MUED 3302 and completion of MUPR 3226 jury. Practice teaching and observation of class instruction in piano at beginning levels for children and adults, and of individual instruction in piano from elementary through intermediate levels. Lesson plans and procedures for teaching specific concepts in piano performance. Three credit hours.

MUED 4192, 4292, 4392 Special Studies and Workshops
Prerequisite: consent of music chairperson. Individual and group participation in
MUEN 1104, 2104, 3104, 4104 Techniques of Accompanying  
Prerequisite: audition. A course designed to equip the keyboard major to function as an accompanist. This course offers both theoretical and practical experience. One credit hour.

MUEN 1113, 2113, 3113, 4113 University Concert Choir  
Prerequisite: audition scheduled with instructor. For experienced choral singers; open to students of any major. The concert choir is a large, select soprano, alto, tenor, bass (SATB) choral ensemble that performs with repertoire of selections representative of the Renaissance through the contemporary periods. One credit hour.

MUEN 1117, 2117, 3117, 4117 Chamber Singers  
Prerequisite: consent of instructor; open to students of any major. A small, select soprano, alto, tenor, bass (SATB) choral ensemble that performs repertoire from various stylistic periods especially written for performance by a small ensemble. One credit hour.

MUEN 1137, 2137, 3137, 4137 Pop Choir  
Prerequisite: consent of instructor. Small, select soprano, alto, tenor, bass (SATB) choral ensemble performing pop choral arrangements. Includes instrumental accompaniment. One credit hour.

MUEN 1140, 2140, 3140, 4140 Community Choir  
Prerequisite: audition and consent of instructor. Open to community members, UALR students, faculty, and staff of all experience levels. Prepares and performs major choral literature. May be repeated for credit. One credit hour.

MUEN 1150, 2150, 3150, 4150 Opera Performance  
Prerequisite: consent of instructor; open to students of any major. Study, through exercises and performances of acting techniques, that aids the singing-actor in the dramatic presentation of operatic repertoire. Once credit hour.

MUEN 1153, 2153, 3153, 4153 Jazz Ensemble  
Prerequisite: consent of instructor. An ensemble studying and performing music in the jazz and jazz-rock styles, with emphasis on instrumental repertoire. One credit hour.

MUEN 1160, 2160, 3160, 4160 Jazz Combo  
Prerequisite: consent of instructor. A small ensemble studying and performing music in jazz styles. One credit hour.

MUEN 1167, 2167, 3167, 4167 University Gospel Chorale  
A performance class that develops the execution of traditional, standard, contemporary, and original compositions of African-American gospel music. Vocal and instrumental techniques, as well as ensemble and improvisational skills, will be developed and improved. One credit hour.

MUEN 1173, 2173, 3173, 4173 Percussion Ensemble  
Prerequisite: consent of instructor. A small ensemble featuring repertoire written for a number of percussion instruments. One credit hour.

MUEN 1183, 2183, 3183 Piano Ensemble  
Prerequisite: consent of instructor. Ensemble performance involving piano duos from various musical periods. One credit hour.

MUEN 3183 Piano Ensemble  
Prerequisites: two semesters of MUPR 2226 (applied piano), consent of instructor. Ensemble performance involving piano duos from various musical periods. One credit hour.

MUEN 1188, 2188, 3188, 4188 Guitar Ensemble  
A performance class for guitarists and bass guitarists. Standard and original works arranged in jazz, pop, and rock styles; will develop reading ability, as well as ensemble and improvisational skills. One credit hour.

MUEN 1194, 2194, 3194, 4194 Basketball Band  
Prerequisite: consent of instructor. An ensemble that performs at UALR basketball games. One credit hour.

MUEN 1196, 2196, 3196, 4196 Chamber Ensembles  
Prerequisite: consent of instructor. Small chamber ensembles, such as trios, quartets, quintets, of woodwinds, brass, and stringed instruments for chamber music experiences. One credit hour.

MUEN 4101 Community Orchestra  
Prerequisite: consent of instructor; no audition required. Open to community members, UALR students, faculty, and staff of all experience levels. Prepares and performs music in all styles in the full orchestra medium. May be repeated for credit. One credit hour.

Music History and Literature (MUHL)

MUHL 2200 Introduction to Music  
Recommended prerequisite: RHET 1311. Introduction to the creative process and history of music, vocabulary and descriptive terms used in the musical arts, and how to write about them. Attendance at arts events is required. Students will learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Fulfills core requirement in aesthetics along with ARHA 2200 and DRTH 2200. Two credit hours.

MUHL 3121, 3221, 3321 Special Topics  
Special topics in music history and music literature. Features certain composers, styles, media, or periods, such as Beethoven symphonies, African-American gospel music, and chamber music. One, two, or three credit hours.

MUHL 3322 Survey of Western Art Music  
Prerequisite: MUHL 2200. A survey of the development of Western art music from antiquity to the present, and an introduction to selected non-Western traditions, with emphasis on the study of music literature through recordings. Required for all BA music major emphases. Lecture. Three credit hours.

MUHL 3331 Music History I  
Prerequisites: MUHL 2200, MUTH 2391. A survey of the development of music civilization from antiquity to 1750, with emphasis on the study of music literature through scores and recordings. Three credit hours.

MUHL 3341 Music History II  
Prerequisites: MUHL 3331, MUTH 2391. A continuation of Music History I. A survey of music in Western civilization from 1750 to the present. Three credit hours.

MUHL 3351 The History of Rock  
A study of the evolution of rock music from its pre-rock origins to the present. Three credit hours.

MUHL 3361 Jazz History and Styles  
Prerequisite: MUHL 2200, 3341, or consent of instructor. A study of the development and styles of jazz music and its principal exponents. Three credit hours.

MUHL 3370 History of the Blues  
A comprehensive study of the origins and development, as well as the evolution, of blues forms from their origins to their present state. Three credit hours.

MUHL 3371 Non-Western Music  
Prerequisite: MUHL 2200 or consent of instructor. A study of selected areas of world music outside Europe and North American through a variety of approaches: exploring the music, clapping or singing, listening, studying it in its cultural context. Satisfies music literature requirement for music majors and minors. Three credit hours.

MUHL 3381 American Music  
Prerequisite: MUHL 2200 or consent of instructor. A study of American musical traditions of the last four centuries, including classical, ragtime, jazz, blues, slave music, spirituals, gospel, musical theatre, white Protestant, popular, rock, American Indian, and country. Satisfies music literature requirement for music majors and minors. Three credit hours.

MUHL 4191, 4291, 4391 Special Studies  
Prerequisite: consent of music chairperson. Special individual or group research in music history. One, two, or three credit hours.

MUHL 4311 Vocal Literature  
Study of solo literature, history and materials for singers, including lieder, arias, songs, and song cycles. Three credit hours.

MUHL 4374 Piano Literature I  
Prerequisite: MUED 3802, or consent of instructor. Study of solo piano literature, including Baroque preludes and fugues, dance suites, toccatas, Classical sonatas, and theme and variation sets, up to about 1800. Three credit hours.

MUHL 4377 Piano Literature II
Music Group and Private Lesson (MUPR)

Students wishing to enroll in private study who do not have basic knowledge of notation and rhythm are advised to enroll in group study—MUAP 1204 Voice Class I, 1214 Piano Class I, or 1254 Pop Guitar Class I—prior to enrollment for individual instruction. Credit awarded for preparatory study does not apply toward a music degree; such study is intended for students who are non-music majors or minors. An applied music fee is charged for all individual instruction.

**College Study**

For students enrolled as music majors or minors, by audition/consent of instructor. Credit is earned on the basis of lesson duration and weekly preparation. For individual study, one credit per semester means a half-hour lesson weekly and implies a minimum of one hour of daily practice. Two credits per semester means a one-hour weekly lesson and implies two hours of daily practice. Lessons will comprise technique and repertoire of progressive difficulty selected to meet the needs and abilities of the student. An applied music fee is charged for all individual instruction. See “Tuition and Fees” on page 21 for details.

Areas of instruction offered:

—05 Trumpet
—06 Percussion
—15 French Horn
—16 Voice
—17 MIDI
—25 Trombone
—26 Piano
—27 Jazz Piano
—28 Improvisation
—35 Euphonium
—36 Harpsichord
—45 Tuba
—46 Organ
—50 Classical Guitar
—51 Electric Bass Guitar
—55 Flute
—56 Violin
—65 Clarinet
—66 Viola
—75 Oboe
—78 Jazz Guitar
—79 Electric Guitar
—76 Cello
—85 Bassoon
—86 String Bass
—87 Jazz Bass
—95 Saxophone
—96 Harp

**MUPR 4230 Advanced Composition**

Prerequisites: MUTH 2291, 4320, consent of instructor and approval of chair. Individual study of methods and styles of musical composition. May be repeated for credit. Two credit hours.

**Music Theory (MUTH)**

**MUTH 1211 Rhythmic Skills**

The rhythmic component of the music fundamentals package. This course will help develop the rhythmic control, accuracy, and notation skill necessary for performance, composition, and music education. Class time will be devoted primarily to ensemble performance of rhythms and development of rhythmic sight-reading ability. Lecture and laboratory. Two credit hours.

**MUTH 1310 Music Fundamentals**

This course is designed to serve both as a preparatory music theory course for the music major and as a music fundamentals course for the non-major or music minor. This course will fulfill the MUTH requirement for the minor. Students will learn about the fundamental rhythmic, melodic, and harmonic practices in Western music and the notational terms and symbols commonly used to communicate these aspects of a musical language. In addition to the study of written materials, students participating in this web-enhanced class will gain basic keyboard knowledge, basic aural skills and fundamental theory concepts through the use of computer-based theory tutorial software and various web-based theory tutorials. Lecture, laboratory, and online components. Upon completion of this course, students wishing to continue with music theory courses will be required to pass a theory fundamentals assessment with a grade of 80% or greater. Three credit hours.

**MUTH 2291 Aural Skills I**

Prerequisite: MUTH 1310. Corequisite: MUTH 2381. Diatonic music will be the focus of sight singing and dictation exercises. Listening techniques will include error detection, chord identification, triad factor identification, nonharmonic tones, and melodic dictation and sightsinging. The lab component will emphasize interval recognition and diatonic chord progressions. Lecture and laboratory. Two credit hours.

**MUTH 2292 Aural Skills II**

Prerequisites: MUTH 1310, 2291. Simple chromatic usage will be featured in melodic and harmonic dictation exercises. Musical examples will include choral phrases, chord identification, error detection, two phrase music, two-part dictation and sightsinging short melodies from music literature. The lab component will emphasize melodic error correction, harmonic progressions, and melodic and rhythmic dictation. Lecture and laboratory. Two credit hours.

**MUTH 2381 Music Theory I**

This course is designed to serve both as a preparatory music theory course for the music major and as a music fundamentals course for the non-major or music minor. This course will fulfill the MUTH requirement for the minor. Students will learn about the fundamental rhythmic, melodic, and harmonic practices in Western music and the notational terms and symbols commonly used to communicate these aspects of a musical language. In addition to the study of written materials, students participating in this web-enhanced class will gain basic keyboard knowledge, basic aural skills and fundamental theory concepts through the use of computer-based theory tutorial software and various web-based theory tutorials. Lecture, laboratory and online components. Upon completion of this course, students wishing to continue with music theory courses within the major of music will be required to pass a theory fundamentals assessment examination with a grade of 90% or greater. This course may be repeated and/or taken for no credit. Three credit hours.

**MUTH 2391 Music Theory II**

Prerequisites: MUTH 2381 and MUTH 2291 with grades of C or greater for declared music majors, or consent of instructor or department advisor. Corequisite: MUTH 2292. Students will build on MUTH 2381 Theory I knowledge of rhythm, melody, and harmony by learning about and gaining mastery of the structural elements of music primarily of the Classical era with additional examination of elements from the Baroque and Romantic eras in Western music. In addition to the study of written and aural materials students will gain basic keyboard knowledge and aural skills in late 17th century and 18th century theory concepts through the use of computer-based theory tutorial software (Mac Gamut CAL), voice vocal part-writing exercises, choral, keyboard, chamber instrumental music and early concerto and symphonic practices. Lecture and laboratory. Three credit hours.

**MUTH 3120, 3220, 3320 Special Topics**

Prerequisite: four semesters of theory or consent of instructor based on placement examination. Harmonic or formal practices and styles such as fugue, sonata form, serial composition, or form and analysis. One, two, or three credit hours.

**MUTH 3231 Form and Analysis**

A survey of forms and genres in music of the common practice period (1600-1800) emphasizing the designations and categories of form. Principles of variety and unity and the language of musical analysis in standard tonal structure will be the topic of study. Two credit hours.

**MUTH 3330 Jazz Theory**

A theoretical survey of jazz harmonic, melodic, and rhythmic principles beginning with blues and modal vehicles. Lecture and laboratory. Three credit hours.
MUTH 3381 Music Theory III
Prerequisites: MUTH 2391 and MUTH 3292 with grades of C or greater for declared music majors or consent of instructor or department advisor. This third course in the music theory sequence will predominately focus on the chromatic elements found in texture, harmony, and melody of the music of the Romantic era as well as some of the chromatic elements within the Classical and Baroque eras of Western music. Students will gain and demonstrate knowledge of the period through written traditional Roman numeral score analysis, macro-analysis, chord building exercises, four-voice part-writing exercises, choral, keyboard, chamber instrumental music, and performance of keyboard reductions of sections from a variety of symphonic works; and, identify both aurally and through written score analysis characteristic modalities, harmonies (diatonic and chromatic), phrase and cadence types, and structural components of typical Beethoven, Chopin, and Wolf instrumental and vocal composition. Lecture and laboratory. Three credit hours.

MUTH 4310 Arranging
Prerequisite: MUTH 2391. A study of the characteristics and styles of arranging for band, orchestral instruments, and chorus. A historical survey of choral and instrumental writing in the Renaissance, Baroque, Classical, Romantic and Twentieth Century, with arranging exercises for each period. Three credit hours.

MUTH 4320 Basic Composition
Prerequisite: MUTH 2391 or consent of instructor. A study of methods and styles of musical compositions written by students. Various methods of beginning an original composition are discussed and demonstrated in addition to lectures and demonstrations on the small forms of composition. Students have the opportunity to apply prior theory knowledge and receive individual attention. Three credit hours.

MUTH 4340 Jazz Composition
Prerequisite: MUTH 3330 or consent of instructor. In this course, students write original compositions in the jazz idiom for varied media. Three credit hours.

MUTH 4190, 4290, 4390 Special Studies
Prerequisite: consent of music chairperson. Special individual or group research in music theory. One, two, or three credit hours.

Nursing (NURS)

NURS 1100 Introduction to Nursing
Corequisite: NURS 1805. An introduction for nursing students to concepts basic to the practice of nursing; historical events influencing nursing; roles of the associate degree nurse and the nursing student; the communication process; patient teaching; medical and nursing terminology; documentation; and basic legal/ethical issues. One hour lecture. One credit hour. Fall semester only.

NURS 1301 Medical Terminology for Nursing
An elective web-based course designed to provide nursing students with an understanding of medical terminology; provides the framework for understanding medical records by presenting terms, abbreviations, symbols, forms and formats commonly used by healthcare providers. Three credit hours.

NURS 1315 Nursing Role Transition
Prerequisites: BIOL 1411, 1412; MATH 1315 or 1302; PSYC 2300 or Sociology 2300; RHET 1311, 1312; and one of the following: HIST 2311, 2312, or POLI 1310; CHEM 1400, 1409, or a higher level; BIOL 2400 or 2401 or equivalents. Prepares LPNs and LPTNs to begin the transition into the role of the RN. Emphasis is on the three roles of the associate degree nurse, the application of critical thinking and the nursing process, professional role transition, the use of effective therapeutic communication, and validation of mastery of basic medical-surgical knowledge/skills confirmed through completion of self-paced modules. Fifteen hours lecture per week for three weeks. Three credit hours. Summer semester only.

NURS 1510 Adult Nursing I
Prerequisites: NURS 1100, 1805, BIOL 1411. Prerequisite or corequisite: BIOL 1412. Designed to prepare the student to provide acute care to middle aged adults with common unmet needs through a variety of clinical laboratory experiences in selected health settings. Students will use the nursing process in a structured setting under faculty supervision. Four hours lecture, 12 hours laboratory per week for one-half semester. Five credit hours. Spring semester only.

NURS 1520 Mental Health Nursing
Prerequisites: NURS 1100, 1805, BIOL 1411. Prerequisite for Transition LPNs: NURS 1315. Prerequisite or corequisite: BIOL 1412. A study of individuals of all ages in all stages of growth and development with psychosocial alterations. Students will use the nursing process while providing care for patients experiencing crises and a variety of mental disorders. Selected health and/or community experiences are under faculty supervision. Traditional option - four hours lecture, 12 hours laboratory per week for one-half semester, spring semester only. Transition option - six hours lecture, 18 hours laboratory per week for five weeks, summer semester only. Five credit hours.

NURS 1805 Adult Nursing I
Prerequisites or corequisites: NURS 1100, BIOL 1411. Designed to prepare the student to meet common, unmet needs of patients. Provides interaction with and patient care for older patients through a variety of clinical laboratory experiences in selected health settings. Students will use the nursing process decision-making framework at a beginning level in a structured setting under close supervision of faculty while providing patient care. Provides a foundation for more advanced study. Four hours lecture, eight hours laboratory per week. Eight credit hours. Fall semester only.

NURS 2130 The Nurse’s Professional Role
Prerequisites: NURS 2510, 2520. Corequisite: NURS 2910. Study of the associate degree nurse’s professional roles with emphasis on the nurse as a manager of care. Includes consideration of obtaining, maintaining, and changing employment in the current health care environment. Additional focus on principles of nursing management, legal/ethical issues, and professional organizations. One hour lecture per week for 15 weeks. One credit hours. Spring semester only.

NURS 2399, 2399, 2399 Special Topics in Nursing
Prerequisite: eligible to enroll in or enrolled in NURS 2510/2520, or consent of chairperson and instructor. Serves as an elective course in the nursing program. Provides opportunity for advanced nursing students to use the nursing process to explore and coordinate projects of their own choosing as a health care professional in community and service learning settings. The students will spend fifteen hours for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the project and will be agreed upon in advance. One, two, or three credit hours. Fall and Spring semesters.

NURS 3201 Pharmacology for Nurses
Prerequisites: NURS 1805 and NURS 1100. Serves as an elective course in the nursing program. An elective web-based nursing course presenting the essential concepts of pharmacology. Designed to promote the use of critical thinking in the application of drug therapy. Emphasis is placed on the integration of pharmacological concepts and the nursing process. Equivalent to two hours lecture per week. Two credit hours. Spring semester only.

NURS 2202 Diagnostic Studies in Nursing
This course discusses common laboratory and diagnostic tests and procedures and the corresponding nursing implications for patients across the lifespan and in various stages of health and illness.

NURS 2510 Obstetric Nursing
Prerequisites: NURS 1510, 1520, MATH 1313 or 1302. A study of developmental tasks of young adulthood and the newborn. Nursing care emphasizes use of the nursing process with the childbearing family in clinical laboratory experiences in selected health settings under faculty supervision. Four hours lecture, 12 hours laboratory per week for one-half semester. Five credit hours. Fall semester only.
NURS 2520 Pediatric Nursing
Prerequisites: NURS 1510, 1520, MATH 1315 or 1302. A study of developmental tasks of infancy through adolescence and of family relationships. Nursing care emphasizes use of the nursing process with children and their families in clinical laboratory experiences in selected health settings under faculty supervision. Four hours lecture, 12 hours laboratory per week for one-half semester. Five credit hours. Fall semester only.

NURS 2910 Adult Nursing III
Prerequisites: NURS 2510, 2520, Corequisite: NURS 2130. Focuses on nursing care of patients with multiple complex unmet needs through numerous clinical laboratory experiences in selected health settings. Multiple roles of the nurse are emphasized and practiced with an emphasis on the nurse as manager of care. The last four weeks of the course are a nursing practicum focusing on use of the nursing process with a variety of patients while providing total patient care under the supervision of a nurse preceptor and faculty. Four hours lecture per week for eleven weeks, eight hours laboratory per week for eleven weeks. One hour seminar and 22 hours laboratory per week for last four weeks of semester. Nine credit hours. Spring semester only.

Personal Awareness (PEAW)

PEAW 1300 The First Year Experience
Helps students reach their educational objectives. Interactive instructional methods promote the development of critical thinking skills and positive educational values. Students 1) complete a personal assessment to enhance their understanding of communication and learning styles, lifestyle risks, and locus of control; 2) learn to identify and use appropriate resources both on campus and within the community; 3) acquire skills needed to promote study, personal wellness, goal setting and achievement; 4) develop strategies to manage money, time and stress wisely; and 5) participate in a service learning experience outside the classroom in a setting designed to foster community service. Three credit hours.

PEAW 1310 Library Research and Resources
Basic techniques for using the library effectively. Use of information resources, including on-line catalog, computerized databases, bibliographies, and indexes. Attention to students’ individual subject needs. Three credit hours.

PEAW 1124, 2124, 3124, 4124 Practicum: Leadership Training
Designed to recognize and enhance the development of student leaders through an orientation to campus and community resources and through participation in service projects and social activities. Enrollment is restricted to students participating in official university leadership groups. One credit hour.
PHIL 1110 Introduction to Ethics
Overview of ethical theory and moral reasoning; case-based approach emphasizing ethical issues in business and technology. Same as IFSC 1110. One hour lecture per week. One credit hour.

PHIL 1310 Introduction to Philosophy
Survey of basic themes in philosophy. Addresses such fundamental concerns as the nature of morality and beauty, the reasonableness of religious conviction, the nature of persons and the existence of free will, the status of animals and the environment, the relation of mind and body, the structure of a just society, and the nature of art through discussion and analysis of readings. Three credit hours.

PHIL 1320 History of Ideas
Historical critique of ideas that have shaped our society. Study of the development and influence of basic concepts such as legal and moral rights, humanism, the nature of social and personal relationships, the characteristics of the good life, the rise of science and the place of religion, and the ideas of progress, destiny, and freedom. Three credit hours.

PHIL 1330 Introduction to Critical Thinking
An introduction to reasoning skills. Focus on the recognition of informal fallacies, the nature, use, and evaluation of arguments, and the characteristics of inductive and deductive arguments. Three credit hours.

PHIL 1340 Ethics and NCAA Rules
Required for all incoming (first year and transfer) athletes. NCAA requirements concerning amateurism, recruiting, agents, benefits, and eligibility in terms of general ethical considerations, the history of college athletics and the NCAA, and ramifications for the university and the college athlete. Ethical support for NCAA compliance stressed. Three credit hours.

PHIL 2320 Ethics and Society
Prerequisite: RHET 1311 recommended. Study of selected texts reflecting a variety of ethical systems from Western and non-Western literary heritages and ethical traditions. Assigned works represent several national ethical literatures, with at least one major ethical text from each of four periods (antiquity, medieval, early modern, and contemporary). Three credit hours.

PHIL 2350 Introduction to Logic
Prerequisite: instructor consent. Introduction to deductive logic including translation of sentences into formal systems, immediate inferences, syllogisms, formal fallacies, proofs of validity, and quantification. Three credit hours.

PHIL 3310 Ways of Knowing
Prerequisite: introductory philosophy class or instructor consent. Introduction to the field of epistemology. Skeptical and realist positions will be assessed by analyzing internal and external accounts of knowledge (including coherence, foundation, naturalized, and reliabilist theories). The connection between epistemology and artificial intelligence will also be examined. Three credit hours.

PHIL 3315 Philosophy and Film
Prerequisite: introduction to philosophy or consent of instructor. An investigation into the role film plays in our culture as a philosophical medium. Specific topics may include: what is mind, and how is it related to body? Is there a human nature? Is there a gender nature? What challenges are presented by the development of new technologies? Can we know God? Do we have free will? What may a government legitimately do to control crime and violence? How do films affect the stories we tell about ourselves, our pasts, and our futures?

PHIL 3320 Modern Philosophy
Prerequisite: introductory philosophy course or instructor consent. This course will examine the writings of early modern philosophers (including Descartes, Locke, Berkeley, Hume, and Kant) and their influence on nineteenth century philosophers (including Hegel, Marx, and Kierkegaard). Three credit hours.

PHIL 3325 Philosophy and Fiction
Philosophical analysis of classic and contemporary novels. Addresses both the philosophy of fiction (with reference to modern critical theory) as well as the philosophical presuppositions and arguments in fiction. Three credit hours.

PHIL 3335 Medical Ethics
Analysis of ethical issues in medicine affecting patients, health-care workers, and the public. Materials drawn from medical, legal, philosophical, and psychiatric sources, addressing such issues as euthanasia, abortion, assisted suicide, involuntary commitment, resource distribution, AIDS, and health insurance. Three credit hours.

PHIL 3340 Business Ethics
Prerequisite: one course in philosophy or business or consent of instructor. Ethical theories and their application to business. Addresses the issues of economic justice; corporate and social responsibility; self-regulation and government regulation; environmental responsibility; affirmative action; and ethical issues in management, production, marketing, advertising, investment, and accounting. Three credit hours.

PHIL 3345 Ancient Philosophy
Prerequisite: introductory philosophy class or instructor consent. Philosophical positions of ancient Greek philosophers (Plato, Aristotle, Epicurus, and others) and their influence on Medieval philosophers (Augustine, Aquinas, Averroes, and others). Three credit hours.

PHIL 3350 Eastern Thought
[See course description for RELS 3350 Eastern Thought.]

PHIL 3360 Philosophy of Religion
[See course description for RELS 3360 Philosophy of Religion.]

PHIL 3370 Existentialism
Prerequisite: introductory philosophy course or instructor consent. Survey of the existential philosophers of the nineteenth and twentieth centuries including Kierkegaard, Nietzsche, Heidegger, Sartre, Camus, Jaspers, Marcel, and Tillich. Three credit hours.

PHIL 3380 Ethics Seminar
Prerequisite: introductory philosophy class or instructor consent. Regional experts will be invited to discuss the central theme of the seminar. The theme will be chosen according to the interest, importance, and relevance to the community. Possible topics include environmental ethics, the African-American family, and the war on drugs. Refer to the semester class schedule for current topic. Three credit hours.

PHIL 3410 Science and Values
Prerequisite: introductory philosophy class or instructor consent. Examination of the methods, presuppositions, and implications of empirical science. Special emphasis will be given to the metaphysical assumptions that ground the scientific enterprise, and the interface between the pursuit of science and the moral interests of society. Three credit hours.

PHIL 3420 Contemporary Philosophy
Prerequisite: introductory philosophy course or instructor consent. Methods and views of the major philosophers of the twentieth century. Readings from writers such as Dewey, Whitehead, Russell, Quine, Wittgenstein, Husserl, Heidegger, Simone de Beauvoir, Foucault, Derrida, and others. Three credit hours.

PHIL 3440 Philosophy of Law
Prerequisite: six hours in philosophy or instructor consent. Examination of topics and areas of study in jurisprudence such as the justification for coercion and punishment; the nature, moral foundation, and authority of law; liberty and freedom of expression under the law; feminist legal theory; critical race theory and other contemporary challenges. Three credit hours.

PHIL 3441 History of Chinese Philosophy
[See course description for HIST 4341 History of Chinese Philosophy.]

PHIL 3450 Classical Political Theory
[See course description for POLS 4380 Classical Political Theory.]

PHIL 3460 Modern Political Theory
[See course description for POLS 4390 Modern Political Theory.]

PHIL 4280, 4380 Topics in Philosophy
Feminism, philosophy of art, metaphysics, and race theory are possible topics. Topics and course offering varies on demand. Two or three credit hours.

PHIL 4290, 4390 Independent Study
Prerequisites: senior standing, 15 hours of philosophy, consent of instructor. Selective reading and written project on a topic submitted by the student and approved by the instructor before registration. Open only to students with demonstrated ability to write research papers of superior quality in philosophy. Applicants unknown to the instructor should submit academic transcripts and samples of their research papers in philosophy. Two or three credit hours.
PHYS 1300 Physics and Society
A general education course with no mathematics prerequisite designed for the nonscience major but open to all students. It considers the relationship of physics and astronomy to various aspects of societal problems. Not part of the core curriculum. Three hours lecture. Three credit hours.

PHYS 1100 Physics and Society Laboratory
Prerequisite or corequisite: PHYS 1300. Designed to examine some experimental aspects of topics discussed in PHYS 1300. Two hours laboratory. One credit hour.

PHYS 1310 Physical Concepts
Prerequisite: MATH 0301 or equivalent. A one-semester course for students in programs of the health related professions. An introduction to the concepts of mechanics, properties of matter, heat, sound, electricity and magnetism, light, and atomic and nuclear physics. Three hours lecture. Three credit hours.

PHYS 1110 Physical Concepts Laboratory
Corequisite or prerequisite: PHYS 1310. Designed to examine some experimental aspects of topics discussed in PHYS 1310. Two hours laboratory. One credit hour.

PHYS 1311 Introduction to Physics
A one-semester survey of the major topics of physics, designed for the student who plans to take PHYS 1321 or 2321 but who has not had high school physics or the equivalent. Does not meet the laboratory science requirement. Three hours lecture. Three credit hours.

PHYS 1320 Musical Acoustics
An introduction to the acoustical foundations of music and speech. Covers the generation and analysis of tones produced by the various musical instruments and the voice, acoustic characteristics of the speech signal, noise pollution, laboratory demonstrations, and acoustical measurements. Three hours lecture. Three credit hours.

PHYS 1120 Musical Acoustics Laboratory
Prerequisite or corequisite: PHYS 1320. Laboratory facilities are available for determining the pitch of musical sounds; filtering music; speech; sine, square, and triangular waves; analyzing the spectrum of sounds; determining one’s threshold of hearing; electronic synthesis of sounds; studying noise pollution; and measuring reverberation time. Two hours laboratory. One credit hour.

PHYS 1321 Elementary Physics I
Prerequisite: MATH 0301 or equivalent, high school physics or PHYS 1311 or equivalent, or consent of instructor. Introduction to the fundamental principles underlying the foundations of classical and modern physics. An algebra-based course designed for majors in the life sciences, pre-professional students, and engineering technology students but is open to any student who meets the prerequisites. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1121 Elementary Physics I Laboratory
Prerequisite or corequisite: PHYS 1321. Two hours laboratory. One credit hour.

PHYS 1322 Elementary Physics II
Prerequisite: PHYS 1321. Continuation of PHYS 1321. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1122 Elementary Physics II Laboratory
Prerequisite or corequisite: PHYS 1322. Two hours laboratory. One credit hour.

PHYS 1381 Applied Physics I
Prerequisite: MATH 0301 or equivalent. Introduction to the fundamental principles underlying the foundation of classical physics and the application of those principles to technical problems. A non-calculus course designed for students in technical fields such as engineering technology or architecture. Open to any student who meets the prerequisites. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1181 Applied Physics I Laboratory
Prerequisite or corequisite: PHYS 1381. Two hours laboratory. One credit hour.

PHYS 1382 Applied Physics II
Prerequisites: PHYS 1381, 1381. A continuation of PHYS 1381 with applications in electricity and magnetism, optics, and modern physics. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 1182 Applied Physics II Laboratory
Prerequisite or corequisite: PHYS 1382. Two hours laboratory. One credit hour.

PHYS 2321 Physics for Scientists and Engineers I
Prerequisite: MATH 1304 or 1451. A calculus-based introduction to the fundamental principles underlying classical physics and modern physics and the applications of those principles in science and engineering. Three hours of lecture and one hour optional discussion. Three credit hours.

PHYS 2121 Physics for Scientists and Engineers Laboratory
Prerequisite or corequisite: PHYS 2321. Two hours laboratory. One credit hour.

PHYS 2322 Physics for Scientists and Engineers II
Prerequisites: PHYS 2321 and MATH 1305 or 1482. Continuation of PHYS 2321 for students majoring in physics, astronomy, chemistry, computer science, engineering, geology, information science, mathematics, and systems engineering. Topics include electricity, magnetism, optics, relativity, and quantum physics. Three hours of lecture and one hour optional discussion. Three credit hours.

PHYS 2122 Physics for Scientists and Engineers Laboratory
Prerequisite or corequisite: PHYS 2322. Two hours laboratory. One credit hour.

PHYS 2391 Cooperative Education Work Experience I
Prerequisite: consent of department chairperson. Corequisites: PHYS 1321, 1121 or PHYS 2321, 2121. Designed to enhance college education through career explorations in astronomy, engineering physics, or physics. A minimum of nine hours work per week. Exact number of hours will depend on the nature of the work experience and will be specified by a contract. Three credit hours.

PHYS 3323 Physics for Scientists and Engineers III
Prerequisites: PHYS 2322 or 1322 and MATH 2306 or 2453. A continuation of topics in relativity and quantum physics introduced in PHYS 2322 or 1322 for students majoring in physics, astronomy, chemistry, computer science, engineering, geology, information science, mathematics, and systems engineering. Three hours of lecture and one hour optional discussion. Three credit hours.

PHYS 3123 Physics for Scientists and Engineers III Laboratory
Prerequisite or corequisite: PHYS 3323. Three hours laboratory. One credit hour.

PHYS 3260 Laboratory Techniques in Nuclear Physics
Prerequisite: PHYS 2322. An introduction to the equipment and laboratory techniques of experimental physics: accelerators, vacuum systems, particle optics and kinematics, detection and analysis of nuclear radiations, and electronic instrumentation. Two hours lecture, one hour optional discussion. Two credit hours.

PHYS 3300 Mathematical Methods of Physics
Prerequisite: MATH 2306. Review of vector calculus, differential equations of physics, and techniques of solution. Fourier series, statistics, probability, error theory, partial differentiation, and functions of a complex variable. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 3311 Mechanics I
Prerequisites: PHYS 2321, MATH 2306. Concepts of Newtonian mechanics, dynamics of particles and systems of particles, gravitation, vector analysis, dynamics of rigid bodies, moment of a force, and the composition of systems, continuous media, small oscillations, and the methods of Lagrange and Hamilton. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 3312 Mechanics II
Prerequisite: PHYS 3311. Continuation of Physics 3311. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 3315 Teaching Physics in the Secondary School
Prerequisite: consent of instructor. A study of physics laboratory experiments and demonstrations available for secondary school physics courses. Three hours lecture. Three credit hours.

PHYS 3320 Physics of the Earth
Prerequisites: PHYS 2322, CHEM 1401 or 1403. Fundamental problems in solid earth sciences: precipitation, volatiles, and tidal friction; seismology and the internal structure of the earth; origin of the geomagnetic field; physical properties of mantle materials; and radioactivity and the age of the earth. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 3330 Medical Physics
Prerequisites: PHYS 1321, 2321 or 2321, 2322. The applications of the concepts, methods, and principles of physics to the diagnosis and treatment of human disease. Three hours lecture. Three credit hours.

PHYS 3330 Medical Physics Laboratory
Prerequisite or corequisite: PHYS 3330. Approximately 18 hours of hospital time supplemented by laboratory work in the Physics Department. Three hours laboratory. One credit hour.

PHYS 3350 Electronics
Prerequisites: PHYS 2322, or 1322 and consent of the instructor. An introduction to digital circuit concepts and basic systems. Digital measurements, switching concepts and logic, flip-flops and multivibrators, counters and registers, digital and analog digital systems. Nine hours laboratory. Three credit hours.

PHYS 3380 Astronautics
Prerequisites: PHYS 2321, 2121, ASTR 1301, 1101. The development of astronautics with emphasis on the extension of aviation into aerospace and the impact of the space age on our society and culture. An introduction to the fundamentals of rocket and space vehicle development, propulsion, dynamics, transfer orbits, and space navigation. Three hours lecture. Three credit hours.

PHYS 3391 Cooperative Education Work Experience II
Prerequisites: major in physics, junior standing, and consent of department chairperson. Further work experiences to enhance education through an internship in astronomy, engineering physics, or physics. A minimum of nine hours work per week. The exact number of hours will depend on the nature of the work experience and will be specified by a contract. Three credit hours.

PHYS 4190 Seminar
Presentation of selected papers by students, faculty members, and invited speakers at weekly departmental meetings. Discussions, analysis, and implications of theoretical and experimental studies in the physical sciences. One hour. One credit hour.

PHYS 4111, 4211 Advanced Laboratory
Prerequisite: consent of instructor. Nine experiments to acquaint the student with the problems and techniques of research activities. Equipment such as a 12-inch computer-controlled telescope with electronic camera, a 17-inch heliostat, and audio spectrum analyzers are available for student use. The advanced laboratory exposes the student to modern research techniques and provides many traditional laboratory experiences. Six to eight hours laboratory. One or two credit hours.
PHYS 4112, 4212 Advanced Laboratory II
Prerequisite: PHYS 4111 or 4211. Continuation of PHYS 4111 or 4211. Three to six hours laboratory. One or two credit hours.

PHYS 4100, 4200, 4300 Independent Study
Prerequisite: consent of chairperson. Individual research by the advanced student. Topics determined on the basis of faculty interests and availability. One to three hours per credit hour. Exact time and nature of the experience will depend on the particular subject of the independent study and will be agreed on at the beginning of the term by the student and the instructor. One, two, or three credit hours.

PHYS 4310 Statistical Thermodynamics
Prerequisites: PHYS 2322, 3323. A microscopic, unified approach to thermodynamics and statistical mechanics with applications to ideal gases, including blackbody radiation and conduction electrons, magnetic systems, the Debye model, and chemical and phase equilibria. Dual-listed in the UALR Graduate Catalog as PHYS 5310. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4321 Electromagnetism I
Prerequisite: PHYS 2322. Includes the Coulomb and Gauss laws, the Poisson and Laplace equations and solutions in several coordinate systems, electric and magnetic energy, AC and DC circuits, Ampere’s and Faraday’s laws, the vector potential, Maxwell’s equations, and the propagation of electromagnetic waves. Dual-listed in the UALR Graduate Catalog as PHYS 5321. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4322 Electromagnetism II
Prerequisite: PHYS 4321. Continuation of PHYS 4321. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4330 Mathematical Methods in the Physical Sciences
Prerequisite: MATH 2450 or consent of instructor. Review of vector calculus, differential equations of physics, and techniques of solution. Fourier series, statistics, probability, error theory, partial differentiation, and functions of a complex variable. Dual-listed in the UALR Graduate Catalog as PHYS 5330. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4331 Modern Physics I
A more detailed treatment of the topics of PHYS 3323. Relativity, quantum mechanics, statistical physics, atomic and nuclear physics, and elementary particles. Dual-listed in the UALR Graduate Catalog as PHYS 5331. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4332 Modern Physics II
Prerequisite: PHYS 4331. Continuation of PHYS 4331. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4340 Solid State Physics
Prerequisite: PHYS 3323. Structure of crystals, dispersion relations, specific heat, phonons, electric and magnetic properties of insulators and metals, band theory of metals, insulators and semiconductors, superconductivity. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4350 Quantum Mechanics I
Prerequisite: PHYS 3323. Concepts and history of quantum mechanics, experimental basis, the uncertainty principle, the Schrodinger equation with applications to simple systems, hydrogen atom, perturbation theory, interpretation of quantum mechanics, symmetry principles. Dual-listed in the UALR Graduate Catalog as PHYS 5350. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4360 High Energy and Nuclear Physics
Prerequisite: PHYS 3323. Properties of the nuclei, nuclear structure and stability, quark–gluon structure of hadrons, thermodynamics of large ensembles of hadrons, nuclear reactions, instrumentation and accelerators. Dual-listed in the UALR Graduate Catalog as PHYS 5360. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4370 Advanced Theoretical Physics
Prerequisite: consent of instructor. Topics vary with the interest and needs of students. Some possible topics are scattering of waves, plasma physics, atmospheric physics, fluid dynamics, and quantum optics. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4375 Planetarium Management
Prerequisites: ASTR 1301, 1101, consent of instructor. Administration, supervision, and management of planetariums in schools, colleges, museums, and other situations, involving such topics as role and scope, personnel, budgets, publicity, planning, and use of planetariums in the contemporary scene. Especially recommended for planetarium directors. Three hours lecture. Three credit hours.

PHYS 4376 Planetarium Technology
Prerequisites: ASTR 1301, 1101, consent of instructor. Production and presentation of planetarium programs at all levels using the Planetarium and its auxiliary equipment. Special emphasis on planetarium astronomy, programming, operations, maintenance of equipment, and the technical aspects of the planetarium field. Especially recommended for those planning to enter into a planetarium career. Three hours. Three credit hours.

PHYS 4380 Wave Motion and Optics
Prerequisite: PHYS 2322. The wave equation and solutions, wave propagation, coherence, interference, diffraction, polarization, refraction and reflection, dispersion, the interactions of light with matter, Huygens’ principle, optical instruments, quantum optics. Dual-listed in the UALR Graduate Catalog as PHYS 5380. Three hours lecture, one hour optional discussion. Three credit hours.

PHYS 4289, 4389, 4489 Undergraduate Research
Prerequisites: consent of department chairperson, junior or senior standing, compliance with approved guidelines (available from chairperson). Trains the student to analyze, plan and conduct experimental work on a research problem. Frequent conferences and a study of research literature with a final report are required. May extend over two semesters. Four to six hours per week for each hour of credit earned. 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. Two, three, or four credit hours.

PHYS 4199, 4299, 4399, 4499 Special Topics
Prerequisite: consent of instructor. Advanced, specialized topics of current interest in physics and astronomy. Dual-listed in the UALR Graduate Catalog at the 5000-level. One, two, three, or four hours of lecture or equivalent per week. One, two, three, or four credit hours.
### Political Science (POLs)

#### POLS 3310 American National Government
An introduction to the political institutions, processes, and patterns of the national government of the United States, focusing on the Congress, presidency, and courts, and on their interrelationships. Attention is given to suffrage and elections, political parties, interest groups, and public opinion. Significant issues and problems of national policy such as civil rights and civil liberties are considered. Three credit hours.

#### POLS 2301 Introduction to Political Science
Introduction to social science concepts as applied to political analysis. Analysis of individuals, groups, and society, particularly the study of social, economic, and political structures and behavior. Introduction to the discipline of political science as a social science, including enduring questions about politics, nature of political analysis, major theoretical and empirical approaches, and critiques of the discipline. Three credit hours.

#### POLS 3101 Seminar in Political Science
[See course description for POLS 3301 Seminar in Political Science]

#### POLS 3201 Seminar in Political Science
[See course description for POLS 3301 Seminar in Political Science]

#### POLS 3300 American Political Parties
Prerequisite: POLS 1310 or junior standing. The nature, function, and history of political parties in the United States and the process by which the will of the electorate is applied to public problems through suffrage, nominations, campaigns, and elections. Three credit hours.

#### POLS 3301 Seminar in Political Science
Prerequisite: POLS 1310 or junior standing. Special problems, issues, or trends in the theory and practice of politics and government. May be repeated with a change of subject and permission of department chairperson. One, two, or three credit hours.

#### POLS 3302 Methods of Political Inquiry
Introduction to basic research methods in empirical political analysis. Research design in political science; data collection techniques; data analysis and hypothesis testing; statistics and computer use for political science. Three credit hours.

#### POLS 3303 American State and Local Government
Problems of state and local government; the party system in the state; organization, functions, and powers of the legislative, executive, and judicial branches of the state government; organization and operation of county, city, village, and township government in the United States; emphasizes the effect of federalism on American state and local governments. Three credit hours.

#### POLS 3305 Elections and Public Opinion
Prerequisite: POLS 1310 or junior standing. The roles of elections and public opinion within the democratic system are thoroughly analyzed, with emphasis on factors leading to different electoral behavior and opinions within the public. Three credit hours.

#### POLS 3310 Policy Process
Prerequisite: POLS 1310 or junior standing. Surveys alternative approaches for analyzing policy making, the political and institutional context affecting the policy process, and selected public policies and decisions. Three credit hours.

#### POLS 3320 The American Presidency
Prerequisite: POLS 1310 or junior standing. Powers, duties, and responsibilities of our greatest executive officer, centering on historic and contemporary conceptions of the office and the presidency as an institutional structure. Three credit hours.

#### POLS 3325 Legislative Process and Behavior
Prerequisite: POLS 1310 or junior standing. Legislative politics in the United States Congress and state legislatures; socialization; role of party, constituency, and legislative institutions as they affect legislative behavior and public policy. Three credit hours.

#### POLS 3331 Public Administration
Prerequisites: POLS 1310 or junior standing. Trends and organization of public administration, fiscal and personnel management, administrative powers, and responsibility. Cross-listed with PADM 3331. Three credit hours.

#### POLS 3338, 3339 Cooperative Education in Political Science I & II
Prerequisites: declared major in political science; POLS 3310, and at least one upper-level course in political science, basic computer literacy, and consent of the department's cooperative education coordinator. POLS 230 is strongly recommended but not required. Cooperative Education in Political Science is designed to give a student majoring in the discipline an educationally applied field work learning experience. A maximum of six hours of Cooperative Education may be taken in the major. Three credit hours.

#### POLS 3348 Internship I
Prerequisites: at least 45 hours of completed work and permission of the instructor. Public service learning in an applied setting. Provides supervised opportunities for students interested in politics and government with practical governmental experience. Students, through the writing of a primary internship paper and the attendance at periodic intern seminars, synthesize practical and theoretical learning in government, politics, and law. Three credit hours.

#### POLS 3350 Arkansas Government and Politics
Prerequisite: POLS 1310 or junior standing. A study of contemporary politics and government of Arkansas with a brief introduction to the state's political history and an introduction on the twentieth-century experience. Topics include elections, the constitution, organization of Arkansas state and local government, and the operation of the executive, legislative, and judicial branches. Three credit hours.

#### POLS 3360 Comparative Government: Western
Prerequisite: POLS 1310 or junior standing. The structure, powers, and principles of the national governments of the leading European nations, including the former Soviet republics, in contrast with one another and the United States. The course also includes Canada. Three credit hours.

#### POLS 3370 Comparative Politics: Developing Areas
Prerequisite: POLS 1310 or junior standing. An examination of the major themes and problems central to third world politics such as development, state-society relations and change. A general focus on cases from Africa, Asia and Latin America will help ground thematic discussions. POLS 3360 is recommended as background. Three credit hours.

#### POLS 3390 American Political Thought
Prerequisite: POLS 1310 or junior standing. The lives and ideas of leading political thinkers of the United States from the colonial period to the present. Three credit hours.

#### POLS 4100, 4200, 4300 Independent Study
Prerequisites: senior standing, 15 credit hours of political science, consent of instructor. Advanced study and research. The student should prepare a prospectus before applying for independent study. One, two, or three credit hours.

#### POLS 4301 Judicial System and Process
A survey of state, local, and federal judicial systems and their interrelationships. Examines judicial structure, functions, and decision-making procedures. Cross-listed with CRJU 4301. Three credit hours.

#### POLS 4302 Law and Society
An examination of the origins and history of law in society, including the evolving roles of judges, juries, defense attorneys, and prosecutors. Examines the evolution of civil and criminal law, the adversary system, and the concept of justice. Cross-listed with CRJU 4302. Three credit hours.

#### POLS 4308 Topics in Urban Studies
[See course description for URST 4308 Topics in Urban Studies]

#### POLS 4310 Seminar in American National Government
Prerequisite: senior standing. Research seminar dealing with selected phases of politics and government in the United States. 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 will involve a substantial writing project. Dual-listed in the UALR Graduate Catalog as POLS 5310. Three credit hours.

#### POLS 4315 Capitol Hill Seminar
An introduction to politics and government in Washington, DC politics. Through meetings with Washington decision-makers from the three branches of government, the major governmental linkage institutions and lobbyists, congressional staffs, members of the media, think tanks, and political analysts, the course facilitates understanding of the theoretical and practical worlds of American politics from an insider perspective. Three credit hours.

#### POLS 4320 American Foreign Policy
Prerequisite: POLS 1310 or junior standing. 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. Dual-listed in the UALR Graduate Catalog as POLS 5320. Three credit hours.

#### POLS 4330 US-Panamanian Relations: Decisions and Documents
Prerequisites: POLS 1310 or equivalent, junior standing, and/or consent of the instructor. A survey of US-Panamanian relations during the 20th century, in the context of US relations with the hemisphere and its rise to global superpower status. Through in-class and on-line lectures and reading of primary documents and secondary materials, students master the background necessary to conduct research projects based on archival materials. Focus on benchmark decisions made by the US and Panama during the 20th century, including 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 include perceptions of national interests, adaptation to changing international realities, conflict resolution, and bargaining behavior during negotiations. Dual-listed in the UALR Graduate Catalog as POLS 5330. Three credit hours.

#### POLS 4333 Seminar in State Politics
Research seminar dealing with selected aspects of state politics such as comparative policy making, political culture variations, and problem solving. Dual-listed in the UALR Graduate Catalog as POLS 5333. Three credit hours.

#### POLS 4340 International Relations
Prerequisite: POLS 1310 or junior standing. Provides a conceptual foundation for understanding and analyzing the international system, states, and actors. Examines economic, political, and military aspects of national security, power, and national interest, and patterns of national decision making. Three credit hours.
POLS 4343 Seminar in Local Politics
Research seminar dealing with selected aspects of local politics such as community power structure, local autonomy, and comparative administration. Dual-listed in the UALR Graduate Catalog as POLS 5343. Three credit hours.

POLS 4345 The Clinton Presidency
Prerequisite: consent of the instructor. 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; campaign strategies; and communication skills of the president; relations with the press, political parties and groups; and the legacy of the Clinton presidency. Dual-listed in the UALR Graduate Catalog as POLS 5345. Three credit hours.

POLS 4348 Internship II
Prerequisite: Senior standing and permission of the instructor. A public service learning experience which 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. Dual-listed in the UALR Graduate Catalog as POLS 5348. Three credit hours.

POLS 4350 Constitutional Law: Governmental Powers
Prerequisite: POLS 1310 or junior standing. The Supreme Court as a political institution in American democracy. Analysis of leading constitutional decisions exploring federal review, federalism, separation of powers, regulation of commerce, due process, and equal protection. The dynamics of Supreme Court decision-making. Three credit hours.

POLS 4351 Constitutional Law: Civil Liberties
Prerequisite: POLS 1310 or junior standing. Civil liberties; analysis of leading constitutional decisions focusing on human freedom and fundamental rights. Emphasis on religious liberty, freedom of expression, racial equality, privacy, criminal procedures, and the dynamics of Supreme Court decision making. Three credit hours.

POLS 4356 Urban Policy and Government
Explores urban policy making and urban government from a critical, analytical, urban studies perspective. Considers historical and modern variations of urban government and intergovernmental relations and how this relates to urban policy making, political will, and quality of urban life. Dual-listed in the UALR Graduate Catalog as POLS 5356. Three credit hours.

POLS 4360 Selected Topics in Political Science
Prerequisite: senior standing. The seminar provides students the opportunity to bring analytical skills and substantive knowledge gained in prior courses to bear on a selected topic of special importance, and will involve a substantial writing project. Students should inquire at the department for the topic that will be addressed in a given semester. Three credit hours.

POLS 4370 Readings in Political Science
Prerequisite: senior standing. In this readings seminar several outstanding books, including classics and notable current works, are assigned for analysis and discussion. The course is designed to give students an opportunity to consider fundamental themes that pertain to political science and public policy relations that pertain to the discipline: the nature of power, politics, and governance. Three credit hours.

POLS 4375 Politics of the Middle East
The course covers the politics and political dynamics of the Middle East, introducing students 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 the impact of the complex relationships among great power intervention, economics, ethnicity, nationalism, and religion. Three credit hours.

POLS 4380 Classical Political Theory
Prerequisite: POLS 1310 or junior standing. Major political ideas and doctrines of political thinkers from Plato to Montesquieu, with emphasis on the contributions of each to the theory and practice of government. Dual-listed in the UALR Graduate Catalog as POLS 5380. Three credit hours.

POLS 4387 Great Decisions in American Foreign Policy
Prerequisites: POLS 1310, HIST 2311, or junior standing. Examines eight current foreign policy issues. 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. Dual-listed in the UALR Graduate Catalog as POLS 5387. Three credit hours.

POLS 4390 Modern Political Theory
Prerequisite: POLS 1310 or junior standing. A continuation of POLS 4380; from Edmund Burke to the present, with emphasis on the more recent political theories and systems of democracy, communism, and socialism. Dual-listed in the UALR Graduate Catalog as POLS 5390. Three credit hours.

POLS 4397 Social Studies Teaching Applications
A link between social studies content with practical applications for classroom instruction. Content information comes from history, geography, political science, sociology/anthropology, and psychology. Modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. Critical components of each of the disciplines integrated into the content presentation and the demonstrated applications. Team taught. Same as GEOG and HIST 4397. Three credit hours.

Psychology (PSYC)

PSYC 2300 Psychology and the Human Experience
Recommended prerequisite: RHET 1311. Focuses on development of the individual in the context of physical and social environments. Topics include the scientific method and its application to the study of the individual, the relationship between brain, behavior, social and personality development, theories of motivation, maladaptive behavior, social cognition and interaction, and the effects of membership in different groups. Students learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Three credit hours.

PSYC 2310 General Psychological Statistics
Prerequisite: MATH 1302 or 1315 or equivalent. A general survey of statistical methods in psychology, including descriptive and inferential techniques. Emphasis on application and interpretation of the statistical procedures. Course does not fulfill requirement for psychology majors, or count toward the minimum of 32 hours of psychology courses for majors. May be used in preparation for required statistics courses. Accepted by some majors. See program advisor for information. Three credit hours.

PSYC 2340 Statistics and Methods I
Prerequisite: MATH 1302 or 1315 or equivalent. A study of descriptive research techniques. Emphasis on design and statistical analysis of descriptive experimentation. Topics include central tendency and dispersion, probability theory, frequency distributions, percentiles, correlation and regression. Three credit hours.

PSYC 2341 Statistics and Methods II
Prerequisite: PSYC 2340. A study of inferential research techniques, with an emphasis on the design and statistical analysis of controlled experimental procedures. Topics include sampling procedures and distributions, hypothesis testing, within and between subjects designs, tests of the difference between two means, and one-way and two-way analyses of variance. Three credit hours.

PSYC 3305 Sensation-Perception
Prerequisite: PSYC 2300. Study of the perception external events and sensory processes underlying that perception. Three credit hours.

PSYC 3308 Urban Environmental Psychology
Prerequisite: PSYC 2300. Study of the effects of physical environments on individuals. Topics include individual perceptions of local environments, pollution, and energy costs; individual privacy needs versus crowding; unique environments, such as wilderness, museums, and zoos; and the design of more livable homes. Three credit hours.

PSYC 3310 Motivation and Emotion
Prerequisite: PSYC 2300. Detailed coverage of important forms of human motivation and curwory treatment of emotions. Three credit hours.

PSYC 3320 Introduction to Applied Psychology
Prerequisite: PSYC 2300. An introduction to the application of psychology to a variety of problems concerning mental and physical health, communication, motivation, the use of tests and other psychological techniques in industry and government, social engineering, environmental issues, and the legal system. Also covers careers in psychology, their educational requirements, and career planning. Three credit hours.

PSYC 3330 Health Psychology
Prerequisite: PSYC 2300. A study of the inter-relationship between psychology and health. Topics include research regarding the mind-body connection, the causes of stress and how stress impacts health, behavioral contributions to an individual's or community’s health status, and the ways in which health is being re-conceptualized. Three credit hours.

PSYC 3340 Meditation Techniques
See RELS 3340.

PSYC 3350 Social Psychology
Prerequisite: PSYC 2300. An introduction to the application of social psychology to a variety of problems concerning mental and physical health, communication, motivation, the use of tests and other psychological techniques in industry and government, social engineering, environmental issues, and the legal system. Also covers careers in psychology, their educational requirements, and career planning. Three credit hours.

PSYC 3356 Developmental Psychology
Prerequisite: PSYC 2300. Development of the individual from conception through adolescence. Topics include prenatal, intellectual, emotional, social, and personality development. Three credit hours.

PSYC 3357 Infancy
Prerequisite: PSYC 2300, 3356, or consent of the instructor. Theory and research on the psychological development of infants. Topics include sensory and perceptual development, intellectual development, social and emotional development, and physical development during the first two years of life. Three credit hours.

PSYC 3358 Adolescent Psychology
Prerequisite: PSYC 2300, 3356, or consent of instructor. Theory and research on the psychological development of adolescents; physical, social, personality, and interpersonal development during adolescence; major theories concerning adolescence. Three credit hours.

PSYC 3360 Abnormal Psychology
Prerequisite: PSYC 2300. The causes, symptoms, and treatment of abnormalities in human behavior. Three credit hours.
PSYC 3363 Psychology of Religion
Prerequisite: PSYC 2300 or consent of instructor. Various interpretations of religious experience in terms of modern Western psychology and their use in religious counseling: varieties of religious experiences, psychological interpretations of religious experiences, religion and stages of human development, and techniques of religious counseling. Three credit hours.

PSYC 3365 Fundamentals of Psychosexual Behavior
Prerequisite: PSYC 2300. The emotional, attitudinal, and developmental parameters of human sexual motivation and behavior; masculinity-femininity; sexual deviation; and prevalent sexual behaviors. Three credit hours.

PSYC 3366 Psychology of Women
Prerequisite: Psychology 2300. The study of the psychology of women, emphasizing the different views of women in our society, the bases of these views, and their implications. Three credit hours.

PSYC 3368 Psychology Cooperative Education
Prerequisite: completed 30 semester hours with a 2.50 GPA overall, PSYC 2300, six upper-level hours in psychology and consent of the psychology department coordinator and the director of cooperative education. Transfer students must have completed one semester in residence. Prerequisite or corequisite: PSYC 2440 or 2310. Designed to complement and extend the classroom learning experience through the application of psychology-based concepts, skills, and technology in a professional work environment. PSYC 3688 normally requires 200 hours per semester with the employer. Number of work hours, activities, and responsibilities depends on the nature of the work and must be specified in a written agreement coordinated with the course instructor and the Office of Cooperative Education. Grading is based on the criteria of the written agreement and is the responsibility of the instructor. Three credit hours.

PSYC 3369, 3469 Internship
Prerequisite:junior standing, consent of instructor. Provides practical experience in a professional urban setting. Students work in a business, government agency, state mental health institution, or similar location giving opportunities to apply their academic background to develop applied skills. Three or four credit hours.

PSYC 3370 Industrial Psychology
Prerequisite: PSYC 2300. An introduction to theories and research regarding human information processing. Topics include attention, memory, problem solving, information representation, and individual differences in cognitive ability. Three credit hours.

PSYC 3410 Sent/Synthesis
Prerequisite: senior standing and 18 hours in psychology, or consent of instructor. Capstone course, applying knowledge and skills from previous psychology courses. One credit hour.

PSYC 4300 Drugs and Behavior
Prerequisite: PSYC 2300, senior standing, or consent of instructor. An analysis of the effects of drug administration on ongoing behavior and learning. Emphasis on drugs of clinical application and uses. Dual-listed in the UALR Graduate Catalog as PSYC 5300. Three credit hours.

PSYC 4301 Drug Abuse
Prerequisite: PSYC 2300. A study of frequently abused drugs, with emphasis on the personal, social, and legal consequences of drug abuse and on the treatment of drug addiction. Three credit hours.

PSYC 4310 Counseling Psychology
Prerequisite: PSYC 2300, senior standing, or consent of the instructor. A survey of the field of counseling and its philosophy, with emphasis on the counseling relationship. Educational, vocational, industrial, and personal counseling are covered. Dual-listed in the UALR Graduate Catalog as PSYC 5310. Three credit hours.

PSYC 4320 Physiological Psychology
Prerequisite: PSYC 2300. Principal neuroanatomical structures, with emphasis on their behavioral correlates. Three credit hours.

PSYC 4221, 4321 Independent Study
Prerequisite: senior standing psychology majors, consent of the professor. Readings and research in various areas of psychology. Two or three credit hours.

PSYC 4325 Personnel Psychology
Prerequisites: PSYC 2300, three hours of statistics. Analysis of industrial psychology in terms of personnel work. Topics include predictors and reliability issues, criteria and related issues, statistical analysis for selection and placement testing, interviews and other non-test procedures, personnel development, and attitude measurement. Dual-listed in the UALR Graduate Catalog as PSYC 5325. Three credit hours.

PSYC 4330 Learning and Memory
Prerequisite: PSYC 2300. Fundamental principles of conditioning and learning. Topics include traditional and modern approaches to reinforcement, punishment, generalization, discrimination, constraints on learning, and applications of learning principles. Dual-listed in the UALR Graduate Catalog as PSYC 5330. Three credit hours.

PSYC 4335 Personality and Social Development
Prerequisite: PSYC 2300. Recommended: PSYC 3366. Examines the interaction between developing children and the social environment and the implications for adult personality using an Eriksonian stage model. Constitutional predispositions, parental care giving, modeling, peer interaction, and social structures considered. Three credit hours.

PSYC 4336 Cognitive Development
Prerequisite: PSYC 2300, and senior standing or consent of the instructor. An introduction to the theories and research on the development of thinking in infants, children, and adolescents. Dual-listed in the UALR Graduate Catalog as PSYC 5336. Three credit hours.

PSYC 4340 Shaping of Human Behavior
Prerequisite: PSYC 2300, and senior standing or consent of the instructor. A study of the application of principles of learning and conditioning to the shaping of the behavior of people in a variety of settings. Ethical issues in changing human behavior. Dual-listed in the UALR Graduate Catalog as PSYC 5340. Three credit hours.

PSYC 4345 History of Psychology
Prerequisite: PSYC 2300. An examination of concepts, methods, and systems that have contributed to the development of modern psychology. Provides excellent preparation for the Advanced Psychology GRE. Three credit hours.

PSYC 4355 Psychology of Personal Adjustment
Prerequisite: PSYC 2300. A study of the healthy personality, emphasizing characteristics, development, and promotion of mental health. Three credit hours.

PSYC 4363 Organizational Psychology
Prerequisite: PSYC 2300, and senior standing or consent of the instructor. An analysis of the interplay of individuals and the organizations for which they work. Topics include job satisfaction, motivation, morale, leadership, group dynamics, conflict, communication, union-management relations, and organizational growth and development. Dual-listed in the UALR Graduate Catalog as PSYC 5363. Three credit hours.

PSYC 4365 Psychological Disorders of Childhood
Prerequisite: PSYC 2300, and senior standing or consent of instructor. A study of the nature, causes, and treatment of disturbed behavior in children and their families. Topics include childhood psychoses, attention deficit disorder, autism, depression, behavior problems, and the abused child. Dual-listed in the UALR Graduate Catalog as PSYC 5365. Three credit hours.

PSYC 4370 Psychology of Personality
Prerequisite: PSYC 2300 and PSYC 3360. A critical survey of modern approaches to the organization and development of personality, with extensive reading to integrate experimental, clinical, biographical, and cultural evidence. Three credit hours.

PSYC 4380 Human Factors Psychology
Prerequisite: PSYC 2300. An analysis of relevant information about human behavior for the design of physical objects people use, the methods for their use, and the design of environments in which people live and work. Three credit hours.

PSYC 4385 Psychology and Public Health
Prerequisites: PSYC 2300, and senior standing, or consent of the instructor for undergraduates; graduate study for graduates. Considers 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. Will explore innovative public health models in which psychological science or applications have been prominent. Dual-listed in the UALR Graduate Catalog as PSYC 5385. Three credit hours.

PSYC 4290, 4390 Senior Seminar
Prerequisite: PSYC 2440 and senior status in psychology major. Topics vary with instructor. Two or three credit hours.

PSYC 4397 Social Studies Teaching Applications
A link between social studies content with practical applications for classroom instruction. Information comes from history, geography, political science, sociology, anthropology, and psychology. Content modeled for prospective secondary education teachers to illustrate how content can be applied in the classroom. Critical components of each discipline integrated into the content presentations and the demonstrated applications. Team taught. Three credit hours.

PSYC 4412 Computer Applications in Psychology
Prerequisite: consent of instructor. The basic instrumentation involved in psychological research, with emphasis on the use of programming language in experimental situations and interfacing microcomputers with common laboratory equipment. Two hours lecture, four hours laboratory per week. Four credit hours.
**PSYC 4450 Experimental Psychology**
Prerequisites: PSYC 2300, 2440. General methodological principles and techniques of psychological experimentation. Students design, conduct, analyze, and report experiments in their areas of interest. Three hours lecture, two hours laboratory. Four credit hours.

**PSYC 4460 Psychological Tests: Composition and Interpretation**
Prerequisite: PSYC 2300, three hours of college-level statistics, and senior standing. An extensive treatment of reliability and validity, norms, and standardization. The construction and use of common psychological tests are considered. Dual-listed in the UALR Graduate Catalog as PSYC 5460. Four credit hours.

**PSYC 4495 Practicum in Psychology**
Prerequisites: senior standing, consent of instructor. The student will perform independent laboratory research or assist in the instructional process. Four credit hours.

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**Public Administration (PADM)**

**PADM 3310 Policy Process**
See POLS 3310. Three credit hours.

**PADM 3331 Public Administration**
Prerequisite: POLS 1310 or junior standing. Trends and organization of public administration; fiscal and personnel management; administrative powers and responsibility. Three credit hours.

**PADM 4313 Public Personnel Administration**
Analysis of the policies, practices, and issues of public personnel administration, including recruitment and selection processes, classification and pay plans, training, career management, separation, grievances and appeals, and unionization and collective bargaining. Three credit hours.

**PADM 4341 Seminar: Comparative Public Administration**
Prerequisite: senior standing. A seminar survey of similarities and differences in bureaucratic structures and processes. Analysis of the organization, staffing, and role of administrative systems in contrasting social and cultural contexts of the Western and non-Western worlds. Dual-listed in the UALR Graduate Catalog as PADM 5341. Three credit hours.

**PADM 4353 Seminar in Budgeting**
Prerequisite: POLS 1310. The course covers budgeting theory and practice. Topics include budgeting as allocations, process games, rituals, history, and politics. It examines institutions and their roles in budgeting as well as current issues such as uncontrollability, balanced budgets, and variance budgeting. Dual-listed in the UALR Graduate Catalog as PADM 5353. Three credit hours.
Radio, Television, and Film (RTVF)

RTVF 2300 Audio and Video Practicum
Required of RTVF majors in the general sequence and news sequence. Also required for minors and recommended for students from other majors. Fundamentals of audio control-room procedures, audio recording and editing, single and multiple channel production, and video editing. Emphasis on correct use and handling of equipment. Minimal exposure to video studio practices. RTVF majors in the general and news sequences must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 2306 Introduction to Motion Pictures
Basic elements of motion, the process of film making, and the approaches to movie aesthetics and criticism. Assignments may include viewing motion pictures at local theatres. Three credit hours.

RTVF 2308 Introduction to Scriptwriting
Study and practice in basic writing and scripting skills needed for the production of electronic media messages and programs. Use of the RTVF computer lab. This course is required of radio, tele, and news majors and minors. Students must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 2330 Mass Media and Society
Required of RTVF majors and minors. Survey of relationships involving mass media, culture, and various other interrelated systems, both nationally and globally. Includes discussion of functions, freedoms, and responsibilities of mass media, as well as the media’s impact on individuals and social groups. Topics include newspapers, magazines, radio, television, and other media. Course satisfies the Individuals, Cultures, and Societies core course requirement. Three credit hours.

RTVF 3304 Global Communications
Structures and roles of media systems within a global context. Examines the U.S. system in relationship to other international media systems. Required of all radio, television, and film general sequence majors and minors. RTVF majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3310 Programming Strategies
Objectives, values, and methods of local and national programming for commercial and public broadcasting and cable operations. Case studies and problem solving simulations. Problems of program planning based on audience analysis, measurement, and targeting. Three credit hours.

RTVF 3320 Announcing and Performance
Prerequisite: RTVF 2300 recommended. Required for journalism and radio, television, and film majors. Development of speaking and performance skills necessary for effective communication via the electronic media. Emphasis on announcing and visual presentation techniques, script reading, and adapting to the demands of the electronic media technologies. Use of the RTVF computer lab. Radio, television, and film majors in the broadcast news sequence must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3330 Audio Production I
Preference given to majors. Principles and techniques of audio production for both radio and television. Emphasis on the development of skills necessary for effective production, equipment, special effects, and computerized editing. Application of skills and problem-solving emphasis in student projects. Radio, television, and film majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3340 Video Production-Studio
Preference given to majors. Introduction to studio control-room operations as they relate to the organizational and creative aspects of program production. Practice with cameras, lighting, microphones, audio console, video switcher, and computer graphics. Students rotate through all crew positions and learn techniques of producing and directing. Emphasis on professional standards. Lecture with laboratory. Radio, television, and film majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3342 Video Production-EPF
Prerequisite: RTVF 2300 recommended. Intermediate-level application of video skills to electronic field production methods of shooting, recording, and editing. Student projects could include commercial and public service announcements, documentary features, and film-technique narratives. Three credit hours.

RTVF 3350 History of the American Movies
History of the development of the American entertainment motion picture industry from the technological to the aesthetic and social to the economic perspectives. Includes the evolution of the American movie industry as it relates to audience uses and gratifications. Three credit hours.

RTVF 3354 Documentary Techniques
Study of the documentary approach in audio and video programs and motion pictures. Emphasis on development of critical standards and examination of the teaching and persuasion techniques used in selected documentary, educational, and propaganda productions. Assignments include viewing motion pictures and television documentaries and listening to radio documentaries. Three credit hours.

RTVF 3356 Movie Criticism
Criticism of contemporary movies, concentrating on the creative elements used in the service of aesthetics and the application of scholarly and popular critical standards. Certain historical references are included. Assignments include the viewing of motion pictures at local theatres. Three credit hours.

RTVF 3367 News Operations
Prerequisite: RTVF 3320 recommended. The viewer/listener is bombarded by information every day from the mass media. Provides students with a real opportunity to see, hear, and learn how all those television and radio news programs are created and to meet some of the people who get the job done. Use of RTVF’s computerized news center. RTVF majors in the news sequence must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3368 News Practices
Prerequisites: RTVF 3320, JOUR 3366 (may be corequisite). Production of programs for the electronic media. Students function individually and on news teams to develop high quality on-air news programs. Use of RTVF’s computerized news center. RTVF broadcast news majors must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 3380, 3280, 3380 Internal Internship
Prerequisites: RTVF 2300, 3330 or 3340, junior standing. On-campus internship providing actual work experience at the University cable television channel “62” and the University radio stations. Required RTVF majors. Only three credit hours counted toward the 36-hour major. Should be completed in two increments, RTVF 3180 and 3280 or with advisor approval, it may be completed in one semester RTVF 3380. Students must earn a minimum grade of C for credit toward the major and graduation. Class may be repeated up to an additional nine credit hours that may count toward the 124 hours required for graduation. One, two, or three credit hours.

RTVF 4170 Special Topics: RTVF
[See course description for RTVF 4370 Special Topics: RTVF]

RTVF 4172 Special Topics: Emerging Technologies
[See course description for RTVF 4372 Special Topics: Emerging Technologies]

RTVF 4180 External Internship
[See course description for RTVF 4380 External Internship]

RTVF 4182 Cooperative Education
[See course description for RTVF 4382 Cooperative Education]

RTVF 4190 Independent Study
[See course description for RTVF 4390 Independent Study]

RTVF 4195 Senior Project
[See course description for RTVF 4395 Senior Project]

RTVF 4272 Special Topics: Emerging Technologies
[See course description for RTVF 4372 Special Topics: Emerging Technologies]

RTVF 4270 Special Topics: RTVF
[See course description for RTVF 4370 Special Topics: RTVF]

RTVF 4280 External Internship
[See course description for RTVF 4380 External Internship]

RTVF 4282 Cooperative Education
[See course description for RTVF 4382 Cooperative Education]

RTVF 4290 Independent Study
[See course description for RTVF 4390 Independent Study]

RTVF 4295 Senior Project
[See course description for RTVF 4395 Senior Project]

RHET 4306 Writing for Business and Government
Prerequisite: RHET 3316 or consent of instructor. Theory of and practice in writing for government and business organizations. Topics will include training manuals, job descriptions, policy writing, records, and correspondence. Dual-listed in the UALR Graduate Catalog as RHET 5306. Three credit hours.

RTVF 4308 Advanced Scriptwriting
Prerequisite: RTVF 2308 or consent of instructor. Writing program-length scripts for audio and video media, including documentaries, entertainment specials, drama, and commercial and public service campaigns. RTVF computer lab available. Three credit hours.

RTVF 4310 Sales and Promotion
Prerequisite: RTVF 3310 recommended. Role of sales in media management, positioning, programming, and business performance. Attention to audience research, prospect identification and development, presentional packages and the process of closing, sales training, verification, legal requirements, and use of the computer. Role of promotion in positioning, identity, audience reinforcement and sales. Practical application projects. Three credit hours.

RTVF 4312 Management Strategies
Prerequisite: junior or senior standing. Role and responsibilities of media managers in broadcast and cable operations, independent production houses, organizational media units, and the new technologies. Case studies with emphasis on coordination of work units and personnel, legal obligations, resource generation and management, public relations, and computers. Required course of all RTVF majors. Students must earn a minimum grade of C for credit toward the major and graduation. Dual-listed in the UALR Graduate Catalog as RTVF 5312. Three credit hours.
RTVF 4316 Policy and Regulation
Prerequisite: junior or senior standing. Examination of current problems, policies, legislation, and regulation of electronic media, including new technologies. Required of all RTVF majors. Students must earn a minimum grade of C for credit toward the major and graduation. Three credit hours.

RTVF 4318 Emerging Technologies
Prerequisite: junior or senior standing. Examination of the media environment created by the new and evolving technologies. The interrelationship of the developing communication technologies (internet, computers, satellites, DBS, high-definition TV, among others) with the traditional public and commercial broadcasting, cable, and other media-related industries. Emphasis on legal, social, and technological issues and their impact on the media environment. Use of the RTVF computer lab and internet access. Dual-listed in the UALR Graduate Catalog as RTVF 5318. Three credit hours.

RTVF 4332 Audio Production Practicum II
Prerequisite: RTVF 3330. Advanced practicum in audio production techniques. Emphasis on production of radio features, spots, and programs for possible broadcast on the University radio stations, KUAR/KLRE. Students may also have the opportunity to be a board operator for the stations. Three credit hours.

RTVF 4342 Advanced Video Practicum
Prerequisite: RTVF 3340. RTVF 3342 is recommended. Students will produce, direct, and/or participate as crew members for the University Channel, and outside projects approved by the program. Minimum commitment of 10 hours weekly. Course may be taken more than once. Three credit hours.

RTVF 4370 Special Topics: RTVF
Prerequisite: junior standing or consent of advisor. Specialized study and research in a wide range of topics. Outside experts and topics will vary. One, two, or three credit hours.

RTVF 4372 Special Topics: Emerging Technologies
Prerequisite: junior standing or consent of the advisor. Specialized study and research in a wide range of topics. Outside experts and topics will vary. One, two, or three credit hours.

RTVF 4380 External Internship
Prerequisites: RTVF major; senior standing; must meet criteria for internship and have internship application approved by the internship coordinator. Professional work experience in media environments. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.

RTVF 4382 Cooperative Education
Prerequisites: RTVF major; senior standing; must meet criteria for internship and have internship application approved by the internship coordinator. Professional work experience in media environments. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.

RTVF 4390 Independent Study
Prerequisites: junior standing or program permission to enroll; approval of independent study application before registration. Individual in-depth study, research, or designated practicum in radio, television, motion pictures, or emerging technologies. Up to three credit hours accepted toward the 36-hour major. One, two, or three credit hours.

RTVF 4395 Senior Project
Prerequisites: completion of at least 90 hours and attainment of major status in the radio, television, and film program. Faculty approval of the project must be obtained before registering. Must be a significant demonstration of the student’s research and/or creative, technical, and problem-solving skills, while assessing his/her knowledge base, and must be of sufficient scope to earn three hours credit. Should be completed in two increments, RTVF 4195 and 4295 or with advisor approval it may be completed in one semester RTVF 4395. The completed project will be presented to and evaluated by all program faculty. Required for graduation. One, two, or three credit hours.

Reading (READ)

READ 0310 College Reading
A combined lecture/reading lab course designed to improve reading vocabulary and comprehension strategies needed for success in college. Students required to take this course must complete it satisfactorily before enrolling in RHET 1312 Composition II. A, B, C, NC. Three credit hours.

READ 1310 College Study Skills
Prerequisite: READ 0310 if required. Provides practical instruction in skills needed for success and retention in college. Two credit hours.
Religious Studies (RELS)

RELS 1320 Myths and the Modern World
Examines the origin, nature, and importance of myth. Readings will explore the relationship between myth, reason, fiction, religion, and ethics. Three credit hours.

RELS 2305 World Religions
Prerequisite: RHET 1311 recommended. Examines the global patterns of contemporary world religions as symbol systems and expressions of discrete, coherent world views. Three credit hours.

RELS 2320 Old Testament Survey
The history, literature, and teachings of the Old Testament; selected readings from representative portions of the books of history, the prophets, and other writings. Three credit hours.

RELS 2330 New Testament Survey
The history, literature, and teachings of the New Testament; emphasis on the Gospel accounts of the life and teachings of Jesus; development and spread of Christianity as reported in the Acts and the letters of Paul. Three credit hours.

RELS 3320 Christianity
A survey of major developments in the history of Christian thought from its origins in the New Testament through the Protestant Reformation. Three credit hours.

RELS 3330 Religious Counter cultures
A cross-cultural survey of sects and cults throughout history, emphasizing contemporary groups in America. Examination of relevant issues concerning cults; the definitions of sect and cult; the relationship between cults and main line religions; brainwashing, deprogramming, government regulation. Same as ANTH 3366. Three credit hours.

RELS 3336 Islam
An examination of the role of Islam as the primary cohesive element in the social, political, and cultural development of the modern Middle East. Comparison and contrast of Western and Middle Eastern perspectives on relevant current issues. Same as HIST 3336. Three credit hours.

RELS 3338 Religion and Modern South Asia
The role of religion (Hinduism, Buddhism, Islam, Christianity) in the formulation of South Asian responses to the processes of Anglicization, Westernization, and Modernization. Same as HIST 3338. Three credit hours.

RELS 3340 Meditation Techniques
Theoretical framework for understanding the meditation experience, namely, Jung’s depth psychology, yoga psychology, and Buddhist psychology; training in specific meditation techniques of various religious traditions, including Hatha Yoga, Zen, and the Silence, as well as the self-analysis of dreams. Three credit hours.

RELS 3350 Eastern Thought
Survey of the beliefs, practices, and group structures of the major Eastern religious and social traditions (including Hinduism, Mahayana and Zen Buddhism, Shintoism, and Confucianism). Three credit hours.

RELS 3360 Philosophy of Religion
Prerequisite: Introductory philosophy course or instructor consent. Major issues in the philosophy of religion including the knowledge of God, the problem of evil, life after death, religious language and experience, and the relationship of faith and reason. Three credit hours.

RELS 3363 Psychology of Religion
See PSYC 3363. Three credit hours.

RELS 3370 Judaism
A survey of major developments in the history of Jewish thought from its origins in the Hebrew Bible through the present. Three credit hours.

RELS 4313 Apocalypse Now...and Then: A History of Apocalyptic Thought and Movements
See HIST 4313. Dual-listed in the UALR Graduate Catalog as RELS 5313.

RELS 4315 Religious History of the United States
See HIST 4315. Dual-listed in the UALR Graduate Catalog as RELS 5315.

RELS 4321 Religion, Society, and Culture
Introduction to the role of shamans, witches, diviners, cultic and magic belief systems, function of myth, ritual, religious symbolism, meaning of spirit possession, revitalization, and ancestor worship in tribal, peasant, and modern societies. Same as ANTH 4321. Three credit hours.

RELS 4180, 4280, 4380 Topics in Religion
Prerequisite: consent of instructor. Analysis of selected issues in religious studies. Course content will change. For descriptive title of the content, refer to the semester class schedule. One, two, or three credit hours.

RELS 4290, 4390 Independent Study
Prerequisites: senior standing, 15 hours of religious studies, consent of instructor. Selective reading and a formal written project on a topic submitted by the student and approved by the instructor at a conference in advance of registration. Open only to students with demonstrated ability to write research papers of superior quality in religious studies. Applicants unknown to the instructor should submit academic transcripts and samples of their research papers in religious studies. Two or three credit hours.

First Year Composition (RHET)

RHET 0310 Composition Fundamentals
Practice in writing, with an emphasis on developing fluency and on editing. Does not fulfill the core curriculum requirement and is intended for students who are not ready for RHET 1311. Institutional credit only; final grades are A, B, C, or NC. Three credit hours.

RHET 1311 Composition I
Practice in writing, with an emphasis on personal, expressive writing, as well as transactional writing. Students will focus on organizing and revising ideas and writing well organized, thoroughly developed papers that achieve the writer’s purpose, meet the readers’ needs, and develop the writer’s voice. Final course grades are A, B, C, or NC. Students must complete this course with a grade of C or greater to take RHET 1312. Three credit hours.

RHET 1312 Composition II
Prerequisite: RHET 1311 with a C or greater or equivalent. Those students required by state law to enroll in READ 0310 must successfully complete that course before enrolling in RHET. Practice in writing, with an emphasis on academic forms. Students will focus on analysis, argumentation, and research and documentation writing. Final course grades are A, B, C, or NC. Three credit hours.

RHET 1320 Honors Composition
For students with superior achievement in English. Fulfills first year composition core curriculum requirement. Admission by invitation. Three credit hours.
The University Writing Center (RHET)

**RHET 1110 Composition Fundamentals Writing Laboratory**
Individualized supplemental help for students enrolled in RHET 0310 or 1311. Practice in basic grammar and writing skills. May be used as a refresher course before taking RHET 1311; may be used to prepare for composition test-outs. Graded C/NC. One credit hour.

**RHET 1130 Writing on Computers**
A practical course for writers to use the computer in the composing process. Students will learn one word processing program well, integrate it into their individual writing processes, and use other software that supports writing on computers. One credit hour.

**RHET 2100 Writing Laboratory**
Individualized supplemental help for students enrolled in RHET 1312 or who have completed composition courses. May be used as a refresher course. Graded C/NC. One credit hour.

Rhetoric and Writing (RHET)

**RHET 2312 Sophomore Composition**
Prerequisite: RHET 1312 or equivalent. An extension of RHET 1312, with emphasis on rhetoric and style. Three credit hours.

**RHET 3301 Editing for Usage, Style, and Clarity**
Prerequisites: RHET 1311 and 1312 or equivalents. A writing course in which students work to improve their writing style and clarity while studying the conventions of standard usage. Three credit hours.

**RHET 3315 Persuasive Writing**
Prerequisite: completion of RHET 1312 or the equivalent. A theoretical and practical introduction to the art of written persuasion. Emphasis on persuasive techniques and their ethical consequences. Three credit hours.

**RHET 3316 Writing for the Workplace**
Prerequisite: RHET 1312 or the equivalent. Study and practice of workplace communication required of professionals who write as part of their jobs. Emphasis on developing a sense of audience and purpose, writing in teams, and learning problem solving strategies. Intensive practice writing workplace documents such as memos, letters, e-mail, résumés, and reports. Three credit hours.

**RHET 3317 Introduction to Nonfiction Writing**
Prerequisite: completion of RHET 1312 or the equivalent. Study and practice of nonfiction writing to explore, investigate, and explain ideas, experiences, and perspectives. Emphasis on style, voice, revision, and collaboration. Three credit hours.

**RHET 3326 Technical Writing**
Prerequisite: RHET 1312 or the equivalent. Intensive instruction in the theory and practice of technical communication. Emphasis on understanding audience, establishing a clear purpose, using technology, acquiring a sense of the profession, and developing strategies for successfully producing individual and collaborative documents. Practice writing genres such as reports, instructions, descriptions, specifications, and proposals. Three credit hours.

**RHET 3320 Contemporary Issues in Language and Rhetoric**
Prerequisites: RHET 1311 and 1312 or equivalents. A study of contemporary issues in language research from rhetorical and social perspectives.

**RHET 4100, 4200 Independent Writing Project**
Prerequisites: senior standing, 12 hours of upper-level RHET courses. For the student of superior ability who wishes to undertake an independent writing project. One or two credit hours.

**RHET 4202 Teaching Writing in Secondary Schools**
Prerequisite: RHET 1312. A methods course team-taught by faculty from the Departments of English and Rhetoric and Writing. Topics include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, and learning approaches to teaching literature and writing. Taken in conjunction with ENGL 4202. Dual-listed in the UALR Graduate Catalog as RHET 5202. Two credit hours.

**RHET 4191, 4291 Writing Internship**
Prerequisites: junior standing, consent of director. On-the-job training for students planning to enter a writing career or teach writing. For assignment, see the director of the University Writing Center in the Department of Rhetoric and Writing. C/NC grading optional. One or two credit hours.

**RHET 4301 Theories of Rhetoric and Writing**
Prerequisites: RHET 1311, 1312, and 3315 or permission of instructor. A study of theories of rhetoric and writing. Dual-listed in the UALR Graduate Catalog as RHET 5301. Three credit hours.

**RHET 4304 Technical Style and Editing**
Prerequisites: RHET 3316 or consent of instructor. Survey and study of institutional and industrial style manuals. Intensive practice in editing technical, business, government, and scientific reports. Dual-listed in the UALR Graduate Catalog as RHET 5304. Three credit hours.

**RHET 4305 Document Design**
Prerequisite: RHET 3316 or 3326. 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. Dual-listed in the UALR Graduate Catalog as RHET 5305. Three credit hours.

**RHET 4306 Writing for Business and Government**
Prerequisite: RHET 3316 or consent of instructor. Theory of and practice in writing for government and business organizations. Topics will include training manuals, job descriptions, policy writing, records, and correspondence. Dual-listed in the UALR Graduate Catalog as RHET 5306. Three credit hours.

**RHET 4307 Writing Software Documentation**
Prerequisite: RHET 3316 or 3326. 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. Dual-listed in the UALR Graduate Catalog as RHET 5307. Three credit hours.
RHET 4315 Advanced Persuasive Writing
Prerequisite: RHET 3132 or equivalent and RHET 3315 or permission of the instructor. Intensive study of classical and new rhetorics. Emphasis on solving rhetorical problems. Dual-listed in the UALR Graduate Catalog as RHET 5315. Three credit hours.

RHET 4317 Advanced Nonfiction Writing
Prerequisite: RHET 3315 or consent of the instructor. An advanced Nonfiction writing class. Study and practice of writing to explore, investigate, and explain. Students will write a variety of professional, scholarly, and popular essays. Dual-listed in the UALR Graduate Catalog as RHET 5317. Three credit hours.

RHET 4325 Legal Writing, Reasoning, and Argument
Prerequisite: RHET 3315 or permission of instructor. Designed for all majors, particularly for pre-law students and students 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. Three credit hours.

RHET 4331 History of Rhetoric I: Beginnings to 1800
Prerequisite: RHET 3315, 3316, and 3317. A study of major theorists and practitioners of rhetoric from classical times through the eighteenth century. Dual-listed in the UALR Graduate Catalog as RHET 5331. Three credit hours.

RHET 4332 History of Rhetoric II: 1800 to Present
Prerequisite: RHET 4331. Study of major nineteenth- and twentieth-century theorists. Dual-listed in the UALR Graduate Catalog as RHET 5332. Three credit hours.

RHET 4345 Topics in Persuasive Writing
Prerequisite: RHET 3315 or consent of the instructor. Theory and practice of persuasion with topics varying each semester. Dual-listed in the UALR Graduate Catalog as RHET 5345. Three credit hours.

RHET 4346 Topics in Technical Communication
Prerequisite: RHET 3316 or consent of the instructor. The theory and practice of technical communication; topics vary each semester. Dual-listed in the UALR Graduate Catalog as RHET 5346. Three credit hours.

RHET 4347 Topics in Nonfiction Writing
Prerequisite: RHET 3317 or consent of the instructor. Theory and practice of nonfiction writing with topics varying each semester. Dual-listed in the UALR Graduate Catalog as RHET 5347. Three credit hours.

RHET 4371 Writing on the Web
Prerequisite: RHET 3316, or RHET 3326, and consent of instructor. Ability to compose effective technical writing and/or computer competency. Introduction to basic web design and construction; course emphasizes audience(s), purpose(s), and accessibility issues such as web site navigation, multiple browsers, and ADA compliance. Dual-listed in the UALR Graduate Catalog as RHET 5371. Three credit hours.

RHET 4375 Grant Writing
Prerequisites: RHET 3316, RHET 3326, or consent of the instructor. Graduate standing required for 5375. Survey, theory and practice of grant writing (solicited and non-solicited) and the philanthropic sector. Topics include, but are not limited to: finding and researching a foundation, resources for each stage of the grant writing process, developing a problem statement, creating objectives and goals, creating a budget, and working with foundations. Dual-listed in the UALR Graduate Catalog as RHET 5375. Three credit hours.

RHET 4390 Colloquium in Rhetoric and Writing
Prerequisite: Senior status. Focuses on professional development and synthesizing the major concepts within rhetorical/writing theory.

RHET 4395, 4396 Cooperative Education
Prerequisite: RHET 3315, 3316, or 3317; recommendation of the departmental cooperative education coordinator. Designed to complement and extend the classroom learning experience by the application of theoretical concepts in a professional workplace. Exact number of work hours, activities, and responsibilities depend on the work experience and must be specified in a written agreement between the employer and student in coordination with the Office of Cooperative Education. Three credit hours.

RHET 4398, 4399 Senior Writing Project
Prerequisites: senior writing major or minor with 12 hours of upper-level courses. Student will complete either a portfolio or a final project written in cooperative arrangement with advisor from both major and minor department. Three credit hours.

Scholars Program (SCHL)

SCHL 1101, 1102 Scholars Colloquium I and II
Prerequisite: admission to the Scholars Program or consent of the program director. Weekly discussions with faculty and community representatives and a time for advising, testing, and other organizational aspects of the program. One credit hour each semester.

SCHL 1300, 1301 Rhetoric and Communication I and II
Prerequisite: admission to the Scholars Program or consent of the program director. Logic combined with oral and written communication; critical examination of ideas and facts in a rhetorical context; and effective communication. Three credit hours each semester.

SCHL 1320, 1321 Science and Society I and II
Prerequisite: admission to the Scholars Program or consent of the program director. Science as a mode of thought and a method of inquiry; impact of scientific thought and scientific technological discoveries on humanity. Three credit hours each semester.

SCHL 2300, 2301, 3300 History of Ideas I, II, and III
Prerequisite: admission to the Scholars Program or consent of the program director. This course examines three recurring themes: humanity’s conceptions of and perceived relationships to the divine; humanity’s conceptions of reality in general and perceived methods of knowing this reality; and humanity’s conceptions of the roles people do and should play as individuals and as members of the social order. These themes are studied in both Western and non-Western cultures, using the methods of history, philosophy, and the study of literature. This is a three-semester course; all three semesters must be taken. The normal sequence is II, III I. Three credit hours each semester.

SCHL 2310, 2311 Individual and Society I and II
Prerequisite: admission to the Scholars Program or consent of the program director. Individual and group relationships, combining views from political science, anthropology, psychology, literature, and history. Three credit hours each semester.

SCHL 3310, 3311 Individual and the Creative Arts I and II
Prerequisite: admission to the Scholars Program or consent of the program director. An examination of the role of artistic endeavors in enriching human life, including material from art, architecture, music, dance, literature, and theatre. Students must attend and discuss concerts, plays, exhibits, and related events. Three credit hours each semester.

SCHL 3350, 3350, 3350 Scholars Seminar
Prerequisite: admission to the Scholars Program or consent of the program director. Special courses on topics that vary from semester to semester. Scholars seminars will explore issues in depth from an interdisciplinary perspective. These seminars involve active modes of learning (such as reports, projects, or fieldwork); enrollment is normally limited to 15. Non-scholars students are admitted when space is available. One, two, or three credit hours.

SCHL 4399 Independent Study
Secondary Education (SCED)

SCED 3110 Instructional Skills and Assessment Practicum
Prerequisite: acceptance into the secondary education minor. Corequisite: SCED 3210. This field placement requires three hours a week of observation and teaching activities in a local public school where students will apply basic instructional skills and assessments to teaching lessons within their content area. One credit hour.

SCED 3210 Instructional Skills and Assessment
Corequisite: SCED 3110. The basic instructional skills include how to utilize different approaches to teaching content and the assessment of learning for secondary students. Students develop pedagogical techniques, activities, and assessments that encourage and promote learning. Students test lesson plans, instructional skills, and selected teaching strategies in classes in area secondary schools. Two credit hours.

SCED 4122 Classroom Management
Prerequisites: admission to Block 2 of the secondary education minor and concurrent registration in all Block 2 courses. Students will learn communications, organization, and human relation skills needed for creating a fair and productive classroom. One credit hour.

SCED 4123 Adolescents with Special Needs
Prerequisite: admission to Block 2 of the secondary education minor and concurrent registration in all Block 2 courses. Students learn strategies for modifying instruction for students with special needs and legal requirements for meeting the needs of special students. One credit hour.

SCED 4124 Adolescent Diversity Practicum
Prerequisite: admission to Block 2 of the secondary education minor and concurrent registration in all Block 2 courses. This field placement requires three hours a week of observation and teaching activities in a local public school. One credit hour.

SCED 4150 Practicum in Teaching Reading in Content Areas
Corequisites: admission to teacher education program, SCED 4250. Provides a supervised field base for putting theory into practice. Students will develop and apply the teaching skills and strategies addressed in the course corequisite. A minimum of 30 clock hours in secondary classrooms is required, during which the unit plan developed in the corequisite course will be implemented. Dual-listed in the UALR Graduate Catalog as SCED 5150. One credit hour.

SCED 4250 Teaching Reading in the Content Areas
Prerequisite: admission to teacher education program. Designed for secondary content teachers to enable them to appraise, diagnose, and remedy reading problems that impede instruction. Dual-listed in the UALR Graduate Catalog as SCED 5250. Two credit hours.

SCED 4305 Middle School Methods
Includes an exploration of the literature related to characteristics of the urban middle school child, contrasting patterns of programs for early adolescence, and techniques for effective teaching in the urban middle school. The importance of student and teacher characteristics and program organization and goals is assessed as they relate to quality education for 10 to 14-year-olds. Dual-listed in the UALR Graduate Catalog as SCED 5305. Three credit hours.

SCED 4321 Teaching Diverse Adolescents
Prerequisites: admission to Block 2 of the secondary education minor and concurrent registration in all Block 2 courses; ANTH 2316, PSYC 2300 or the equivalent. Students use concepts of adolescent development and cultural diversity to develop curriculum, design lessons, and select teaching materials and techniques to meet the needs of students at different developmental stages and of different cultures. Three credit hours.

SCED 4330 Reflective Teaching and Professionalization
Prerequisites: Blocks 1 and 2 of the secondary education minor. Corequisite: TCED 4600. Students are expected to develop their capacity to be professional, reflective practitioners as they deal directly or indirectly with teaching, management, or communications encountered during student teaching. Three credit hours.

SCED 4361 Teaching Adolescent Literature
A study of adolescent development in literary and literary skills. A survey and examination of multiculturally balanced selection of works of literature for adolescents and will learn to integrate reading and writing skills with adolescent literature. Dual-listed in the UALR Graduate Catalog as SCED 5361. Three credit hours.

SCED 4376 Introduction to Secondary Education
Prerequisites: EDFN 2300, 3320. Corequisites: SCED 4150, 4250. An introduction to the secondary school teacher’s roles as planner, instructor, and evaluator and to the multicultural environment of secondary schools. Students test classroom teaching, management, and evaluation strategies in area secondary schools. Three credit hours.

SCED 4379 Pre- and Early Adolescence in the Secondary School
Required for all K-12 and middle school certification. The study of physical, social, emotional, intellectual, and personal development of the 10- to 14-year-old pupil. Application of learning theory to social and educational context of this age group. Dual-listed in the UALR Graduate Catalog as SCED 5379. Three credit hours.

SCED 4100, 4200, 4300 Independent Study in Secondary Education
Prerequisite: admission to teacher education program or consent of instructor. An in-depth study of special education problems in the junior or senior high school. One, two, or three credit hours.
Social Work (SOWK)

SOWK 3301 Introduction to Social Work
Historical background and description of social work in the areas of medicine, psychiatry, public assistance, social insurance, and community service, with emphasis on the function of the social worker, and professional standards and ethics. Three credit hours.

SOWK 3302 Social Work and Diversity
Prerequisite: Formal admission to social work major, SOWK 3303. Corequisite: SOWK 3331. Focus on the commonalities and diversities existing among groups in American society, and the nature of transactions between and within these groups. Designed to promote understanding and respect for the diverse experiences of people from different cultural heritages.

SOWK 3303 Human Behavior in the Social Environment I
Prerequisites: SOWK 1301, formal admission to social work major. Part One of a sequence of two, this course is an examination of the interaction of the biological, psychological, and social factors that shape individual experiences and the underlying dilemmas. Emphasis is given to developing an understanding of how the human develops in his/her relationships within the family system and with the world around. It draws from theoretical perspectives in psychology, sociology, social psychology, biology, minority relations, and psychiatry. Three credit hours.

SOWK 3304 Human Behavior in the Social Environment II
Prerequisites: SOWK 3303; social work major. Part II of a two-part sequence. An examination of the interaction of the biological, psychological, and social factors that shape individual experiences, and the underlying dilemmas. Designed to give the student a broad understanding of how the human develops in his/her relationships within the family system and with the world around. It draws from the theoretical perspectives in psychology, sociology, social psychology, biology, minority relations, and psychiatry. Three credit hours.

SOWK 3313 Social Welfare Policy
Prerequisites: SOWK 1301. Describes and analyzes the policies and services rendered by local, state, regional, and national agencies as well as the policy implications that impinge on social service delivery. The Code of Ethics charges social workers with the responsibility to act to prevent and eliminate discrimination by influencing change in policies that discriminate. Policy practice entails analyzing and influencing policies to promote social and economic justice. Social work majors. Three credit hours.

SOWK 3314 Social Welfare Policy II
Prerequisites: SOWK 3313; social work major or human services minor. Part II of a two-part sequence. A continuation of the description of policies and services rendered by local, state, regional, and national agencies with perspective of impact on social service delivery. Advocacy will be given greater emphasis in Part II. The Code of Ethics charges social workers with the responsibility to act to prevent and eliminate discrimination by influencing change in policies that discriminate. Entails analysis of and methods toward influencing policies to promote social and economic justice. Three credit hours.

SOWK 3315 Policy Practice
Prerequisites: SOWK 3313, SOWK 3314. Training student social workers to engage in policy practice. Oriented to the creation of the professional skills associated with policy action. Conceptualizes policy action as a series of skill areas that start with problem identification and analysis and conclude with policy proposal, action planning, and mobilization of political and public support. Three credit hours.

SOWK 3321 Social Welfare Problems and Programs
Prerequisite: SOWK 1301 recommended. Analysis of the development of social welfare as institutionalized response to social change, with emphasis on the dilemma of poverty in an affluent society. Three credit hours.

SOWK 3322 Methods of Social Work Research
Prerequisites: MATH 1302 or 1315, formal admission to social work major. An overview of the approaches to and uses of research in generalist social work practice. Emphasis placed on the research-practice link with a focus on conducting practice and program evaluation within a social work agency setting. Ethical and human diversity issues are considered throughout the course.

SOWK 3323 Social Work with Children and Adolescents
Prerequisite: SOWK 1301 recommended. The areas of social work concerned with the welfare and well-being of young people, including protective services; family counseling, school social work, hospital social work, and juvenile justice. Three credit hours.

SOWK 3331 Social Work Practice I
Prerequisites: SOWK 3303 and declared major in social work. Co-requisite: SOWK 3302. This is the first component of the two-course practice sequence, introduces the student to therapeutic relationship building, interviewing, and client-system assessment. Primary objective of the sequence is to prepare students to engage in culturally-competent, family-centered practice which incorporates a strengths perspective needed for practice with individuals, families, groups, organizations, and communities. Three credit hours.

SOWK 3381, 3181 Social Statistics
Prerequisite: SOCI 2300. Recommended: MATH 1301 or equivalent. Basic statistical techniques and their corresponding theoretical premises, which are often used in statistical reasoning in sociology. Qualitative variables, characteristics of attributes, measures of their variation, correlation, and tests of significance are stressed. Three credit hours.

SOWK 4190 Independent Study
Prerequisites: SOWK 3301, formal admission to the BSW program, and consent of instructor. Advanced study assignments in selected areas of social work. One, two or three credit hours.

SOWK 4212 Field Seminar I
Prerequisites: SOWK 3331, social work major. Corequisite: SOWK 4314. An opportunity for the student to further integrate knowledge and insights developed in the classroom by exploring the field experience through the group process. The direct practice experience of assessment, intervention, and termination with evaluation provides the basis for student self-evaluation. The structure of the seminar provides for spontaneous and vicarious learning with structured assignments. Sessions are facilitated by a faculty coordinator. However, students will take responsibility for presenting content and process. The group will take the leadership role. Two credit hours.

SOWK 4213 Field Seminar II
Prerequisites: SOWK 4212, social work major. Corequisite: SOWK 4342. Field Seminar II provides further opportunity for the student to integrate knowledge and insights developed in the classroom by exploring the field experience through the group process. The direct practice experience of assessment, intervention, and termination with evaluation provides the basis for student self-evaluation. The structure of the seminar is similar to Field Seminar I. Two credit hours.

SOWK 4290 Independent Study
Prerequisites: SOWK 1301, formal admission to the BSW program, and consent of instructor. Advanced study and assignments in selected areas of social work. One, two or three credit hours.

SOWK 4308 Child Maltreatment Challenges in Practice
Prerequisite: SOWK 4323. An exploration of actual child welfare practice issues. Practice of essential skills for directly identifying and solving problems-focused techniques. Skills learned in this course are integrated with actual practice experience through the SOWK 4341 Field Experience I and SOWK 4312 Field Seminar I. Three credit hours.

SOWK 4323 Child Maltreatment Challenges in Society
Prepares students to work in the area of child welfare and provides information to enhance student’s knowledge and understanding of child maltreatment. Topics include types of child maltreatment, legal and medical issues, short and long term effects of maltreatment, and treatment methodologies appropriate with diverse populations. Dual-listed in the UALR Graduate Catalog as SOWK 5308. Three credit hours.

SOWK 4332 Social Work Practice II
Prerequisites: SOWK 3331, social work major. The second in the three-course sequence, this course builds on the foundation interviewing and client-system assessment skills by introducing students to various intervention skills to be used with individuals, groups, communities, and in family-centered practice, which were the focus of Practice II. Practice III introduces methods for terminating a client from service by focusing on final empowerment strategies and strategies for program and practice evaluation. The focus on program and practice evaluation, in correlation with social work values, will integrate research methods into the professional world of practice. Skills learned in this course will also help to prepare the student for supervisory and managerial positions within the agency arena and are integrated with actual practice experience through the SOWK 4342 Field Experience I and SOWK 4213 Field Seminar I. Three credit hours.

SOWK 4333 Social Work Practice III
Prerequisites: SOWK 4332, social work major, senior standing. The third in the three-course sequence, this course builds on the foundation interviewing and client-system assessment skills presented in Practice I and the various intervention skills to be used with individuals, groups, communities, and in family-centered practice, which were the focus of Practice II. Practice III introduces methods for terminating a client from service by focusing on final empowerment strategies and strategies for program and practice evaluation. The focus on program and practice evaluation, in correlation with social work values, will integrate research methods into the professional world of practice. Skills learned in this course will also help to prepare the student for supervisory and managerial positions within the agency arena and are integrated with actual practice experience through the SOWK 4342 Field Experience I and SOWK 4213 Field Seminar I. Three credit hours.

SOWK 4341 Field Experience I
Prerequisites: SOWK 3331, social work major. Corequisite: SOWK 4332. Enrollments must be social work majors. Field Experience I is the first of two opportunities for the student to integrate knowledge and insights developed in the classroom into practice by working directly with the supervision of a social worker in a human services agency, either public or private. Field Experience I provides a structured learning environment in which the student can demonstrate an understanding of the values and ethics of social work and begin to develop the skill to apply them. The Field Experience I is 200 hours of direct practice experienced in the fall semester of the senior year. Three credit hours.
SOWK 4342 Field Experience II
Field Experience II is the second of two opportunities for the student to integrate knowledge and insights developed in the classroom into practice by working directly with the client system under careful supervision of a social worker in a human services agency, either public or private. Field Experience II provides a structured learning environment in which the student can demonstrate an understanding of the values and ethics of social work and begin to develop the skill to apply them. The Field Experience II is 200 hours of direct practice experienced in the spring semester of the senior year. Three credit hours.

SOWK 4350 Program Evaluation
Prerequisite: SOCI 2300 or POLS 2301. This course will focus on the concepts underlying models of program evaluation as well as methods of measuring program effectiveness in human service organizations and agencies. Students learn how to write effective mission statements, goals and objectives; use program logic models as framework for evaluation; use quantitative (but not statistical) assessment techniques; write effective evaluation reports; and apply evaluation findings to program improvement. Three credit hours.

SOWK 4390 Independent Study
Prerequisites: SOWK 1301, formal admission to the BSW program, and consent of instructor. Advanced study and assignments in selected areas of social work. One, two or three credit hours.

Sociology (SOCI)

SOCI 2300 Introduction to Sociology
Recommended: RHEF 1311. Introduction to sociological concepts. Analysis of society, particularly the study of human organization. An overview of the theories and methods utilized in the discipline is provided and will be used as a framework for critical analysis. Students will learn to investigate group and societal connections in major social institutions-religion, family, politics, economics, education. Three credit hours.

SOCI 2301 World Cultures
See INTS 2301.

SOCI 3181 Statistics Laboratory
Corequisite: SOCI 3381. A data analysis laboratory emphasizing calculators and computer use in statistics. Computer use will emphasize the SPSS package. One hour laboratory per week. One credit hour.

SOCI 3185 Research Methods Laboratory
Prerequisites: SOCI 2300, 3181, 3381, 3383 or 3384. Corequisite: SOCI 3385. Selected skills and techniques in questionnaire construction, data coding, computer use, survey research, and sampling designs. One hour laboratory per week. One credit hour.

SOCI 3300 Sociology of Sports
An overview of sports in the contemporary United States; covers the athletes, the spectators (on site, television, and radio), the therapeutic functions for individuals, and the impact of sports on other institutions in society. Explores the commercialization of sports and its effects on other economic activities. Three credit hours.

SOCI 3316 Japanese Culture and Society
Prerequisite: ANTH 2316 or SOCI 2300. The anthropological and sociological study of Japanese culture and society; covers Japanese history, major social institutions, and aspects of culture that are unique to Japan. Three credit hours.

SOCI 3318 Sexuality, Society, and Culture
See ANTH 3318.

SOCI 3330 Racial and Minority Groups
Prerequisite: SOCI 2300. Analysis of social processes in a pluralistic society, with emphasis on the cultural contributions and ethos of the different ethnic groups. Three credit hours.

SOCI 3333 Women in a Changing Society
Prerequisite: SOCI 2300. An analysis of the socialization of women for their ascribed roles, with emphasis on the molding forces of culture and the changes taking place in women’s roles in contemporary, US, and other societies. Three credit hours.

SOCI 3334 Social Problems
Prerequisite: SOCI 2300. Application of sociological principles to the study of social problems, such as juvenile delinquency, sex-based inequality, educational systems, ethnic groups, ethnic group conflict, crime, industrial conflict and unemployment, poverty, and the maintenance of a free society. Three credit hours.

SOCI 3335 Sociology of Deviant Behavior
Prerequisite: SOCI 2300. A survey of deviant behavior in modern society. Emphasis on the theories and causes of deviant behavior, including societal reactions and deviant action and reaction in the contemporary United States. Emphasis on the various theoretical orientations used in sociology today. Three credit hours.

SOCI 3336 Criminology
Prerequisite: SOCI 2300. The nature of criminal deviation, theories of causations, processes of criminal justice, penal and correctional methods and institutions. Three credit hours.

SOCI 3337 Juvenile Delinquency
Prerequisite: SOCI 2300. Juvenile delinquent behavior, problems, theory, cause, control, and prevention. Three credit hours.

SOCI 3340 Experiences of Black Americans
Prerequisite: SOCI 2300. The experiences of blacks in America are subdivided into significant periods with corresponding motifs. Attempts will be made to conceptualize the major influences from each motif-period in the struggle of blacks for sociopolitical and economic equality in a dominantly white society. Three credit hours.

SOCI 3341 Urban Sociology
Prerequisite: SOCI 2300. Analysis of elements of change in cities and suburbs in contemporary society. Social problems related to urbanization and urban centers. Three credit hours.

SOCI 3343 Social Stratification
Prerequisite: SOCI 2300. Analysis of selected theories of stratification, various lifestyles, other bases of social differentiation, and their consequences for individuals and society. Three credit hours.

SOCI 3346 Sociology of the Family
Prerequisite: SOCI 2300. The family as a major unifying force for the individual, the community, and the total society, with emphasis on parental and marital dynamics; analysis of the changes associated with the emergence of urban industrial societies. Three credit hours.
SOCI 3350 Family Violence
A consideration of abuse, neglect, and conflict within the family. Review of basic
theories of interpersonal violence and conflict resolution. Focus on abuse of
children, siblings, spouses, and elders. Discussion of social policy responses and
appropriate interventions. Three credit hours.

SOCI 3370 The Sociology of Mental Health
The cultural, social, and social-psychological aspects of mental health.
Examination of issues such as who is normal, how one is declared abnormal,
thories of mental health and illness, and various modes of treatment. Three
credit hours.

SOCI 3373 Medical Sociology
Prerequisite: SOCI 2300. A study of the social organization and use of health
services in United States society. Emphasis on the social factors affecting
availability of and access to these services. Three credit hours.

SOCI 3376 Sociology of Health and Illness
Prerequisite: SOCI 2300. Sociological theory and research related to social
epidemiology and to the organization of efforts to cope with illness and disease.
Three credit hours.

SOCI 3381 Social Statistics
Prerequisite: SOCI 2300. Recommended: MATH 1301 or equivalent. Basic
statistical techniques and their corresponding theoretical premises, which are
often used in statistical reasoning in sociology. Qualitative variables,
characteristics of attributes, measures of their variation, correlation, and tests of
significance are stressed. Three credit hours.

SOCI 3383 Classical Sociological Theory
Prerequisite: SOCI 2300. The conceptual and historical framework of classical
sociological theories will be considered. Special emphases will be given to pre‐
century theory and the philosophical underpinnings of sociological theory.
Three credit hours.

SOCI 3384 Contemporary Sociological Theory
Prerequisite: SOCI 2300. Introduction to and critical examination of contemporary
sociological theory. The course offers an overview of the concepts, methods, and
theoretical perspectives employed by contemporary sociologists. Students are
encouraged to take this course after completing SOCI 3363. Three credit hours.

SOCI 3385 Research Methods
Prerequisites: SOCI 3181, 2300, 3381, 3383 or 3384. Corequisites: 3185, senior
standing. Methods of research in sociology: trends in methodology and use of
computers in processing data and presentation of research reports. Three credit
hours.

SOCI 3392 Environmental Sociology
Prerequisite: SOCI 2300. The environment viewed from a sociological perspective.
The environmental movement and issues, such as the transition to an ecologically
sound society, as they relate to the social structure of United States society. Three
credit hours.

SOCI 4190 Independent Study
[See course description for SOCI 4390 Independent Study]

SOCI 4195 Senior Seminar
[See course description for SOCI 4195 Senior Seminar]

SOCI 4290 Independent Study
[See course description for SOCI 4290 Independent Study]

SOCI 4295 Senior Seminar
[See course description for SOCI 4295 Senior Seminar]

SOCI 4301 Computer Use: Packaged Programs
Designed to teach the student to access and use various computer packages such as
SPSS and SAS. Some understanding of research and statistical techniques may
be helpful but is not required. Graduate students select an appropriate analysis
from the ISR, Myths and Realities of Aging data, or other appropriate data base,
and write up the results of this analysis. Dual-listed in the UALR Graduate Catalog
as SOCI 5301. Three credit hours.

SOCI 4320 Sociocultural Change
See ANTH 4320.

SOCI 4321 Religion, Society, and Culture
See ANTH 4321.

SOCI 4328 Sociology Field Experience
Prerequisites: SOCI 2300, senior standing, or consent of chairperson. Practical
experience consisting of at least 90 hours of supervised work in a community
agency or any other context of sociological interest. The objective is for students to
apply theoretical orientations to real world situations and to develop working
skills. May be repeated once. Three credit hours.

SOCI 4330 Political Sociology
Prerequisite: SOCI 2300. The sociological study of the United States political
economy. Sociological theories and concepts applied to the analysis of various
aspects of political theory and behavior. Three credit hours.

SOCI 4332 Population Analysis
Prerequisite: SOCI 2300. See ANTH 4332.

SOCI 4353 The Sociology of Developing Nations
Prerequisite: SOCI 2300. A study of the socioeconomic characteristics of third
world nations with emphasis on the sociocultural values and dynamics relevant
to economic development theories and programs. Three credit hours.

SOCI 4365 Sociology of Organizations
Prerequisite: SOCI 2300. Examination of a variety of complex organizations in
modern society: schools, hospitals, corporations, unions, universities, and
government. Organizational structures and processes are analyzed with emphasis
on inter‐organizational and organization‐environment relations. Three credit
hours.

SOCI 4387 Seminar in Applied Sociology
Prerequisites: SOCI 2300, 3185, 3381, 3383 or 3384, 3185, 3385, and senior standing.
The use of sociological theories and methods to address issues of practical
concern to clients; clinical practice, policy analysis, consultation to business and
government, and applied social research. Three credit hours.

SOCI 4390 Independent Study
Prerequisites: SOCI 2300, 3181, 3381, 3383 or 3384, 3185, 3385 or 315 hours in
departmental courses, senior standing, or consent of chairperson. Advanced
assignments in selected areas. One, two, or three credit hours.

SOCI 4395 Senior Seminar
Prerequisites: 15 hours in department courses or consent of the chairperson.
Topics vary. One, two, or three credit hours.

SOCI 4397 Social Studies Teaching Applications
Links social studies content with practical applications for classroom instruction.
Information comes from history, geography, political science, sociology/anthropology, and psychology. Modeled for prospective secondary
education teachers to illustrate how content can be applied in the classroom.
Critical components of each of the disciplines will be integrated into the content
presentations and the demonstrated applications. Team taught. Three credit
hours.

SOCI 4399 Sociology Cooperative Learning Internship
Prerequisite: declared major, 60 hours of course work completed, consent of the
department chairperson and director of cooperative education. Placement in an
applied work experience in sociology. Students will work under the direction of
specialists in areas related to sociology. Credit will be awarded based on at least
200 hours during the semester and fulfillment of the contractual obligations
agreed to by both UALR and the public/private agency where placement occurs.
Three credit hours.

SOCI 4485 Ethnographic Methods
See ANTH 4485. Dual-listed in the UALR Graduate Catalog as SOCI 5485.
Spanish (SPAN)

SPAN 1111 Elementary Spanish Laboratory I
Corequisite: SPAN 1311. Supervised laboratory practice in listening, speaking, and aural comprehension. One credit hour.

SPAN 1112 Elementary Spanish Laboratory II
Corequisite: SPAN 1312. Continuation of SPAN 1111. One credit hour.

SPAN 1310 Reading Spanish
Essential grammar for reading Spanish with minor emphasis on pronunciation. Will not substitute for any other course in Spanish or apply toward a major or minor in Spanish. Three credit hours.

SPAN 1311 Elementary Spanish I
A course for students with no knowledge of Spanish. Instruction in correct pronunciation, aural comprehension, and simple speaking ability. Three credit hours.

SPAN 1312 Elementary Spanish II
Prerequisite: SPAN 1311 or equivalent. Practice in correct pronunciation, aural comprehension, and simple speaking ability leading to mastery of basic grammar and limited reading ability. Three credit hours.

SPAN 1315 Conversational Spanish
Prerequisite: SPAN 1312 or consent of instructor. A performance course with emphasis on elementary conversation and discussion. For students with a basic knowledge of Spanish grammar. Three credit hours.

SPAN 2311 Intermediate Spanish
Prerequisite: SPAN 2311 or equivalent. The intermediate course leads to a greater facility in the spoken language and to more advanced reading skills. Three credit hours.

SPAN 2315 Intermediate Spanish Conversation
Prerequisite: SPAN 2312 or consent of instructor. A course to practice oral skills on a wide range of topics. Students narrate, describe, compare, and comment. Three credit hours.

SPAN 3115, 3116, 3117 Advanced Spanish Conversation
Prerequisite: SPAN 2315 or higher or consent of instructor. A course to practice oral skills on a wide range of topics. Leads to expanded vocabulary mastery and greater fluency in the spoken Spanish. May be taken to a maximum of three hours.

SPAN 3310 Communications: Presentational
Prerequisite: SPAN 2311. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the presentational mode. Three credit hours.

SPAN 3311 Communications: Interpersonal
Prerequisite: SPAN 2311. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpersonal mode. Three credit hours.

SPAN 3312 Communications: Interpretive
Prerequisite: SPAN 2311. An integrated approach to skill acquisition leading to intermediate-high proficiency. Within the rubric of communication, content focuses on the interpretive mode. Three credit hours.

SPAN 3316 Spanish Phonetics
Prerequisite: SPAN 2312 or consent of instructor. The sounds and phonetic symbols of the Spanish language with reference to phrasing, stress, rhythm, and intonation. Three credit hours.

SPAN 3321 Spanish Short Stories
Prerequisite: SPAN 2312 or consent of instructor. Reading and criticism of short stories by outstanding authors. Three credit hours.

SPAN 3332 Introduction to Spanish Literature
Prerequisite: SPAN 2312. History of the literature of Spain from the medieval period to the present. Three credit hours.

SPAN 3333 Selected Readings in Spanish Literature
Prerequisite: 3000-level Spanish course or consent of instructor. Reading and discussion of selected works from Spanish and Spanish American literature. Three credit hours.

SPAN 3334 Hispanic Culture: Peninsular
Prerequisite: SPAN 2312 or equivalent (or corequisite with consent of instructor). Historical, sociological, and cultural background of people of the Iberian peninsula. Three credit hours.

SPAN 3335 Hispanic Culture: Americas
Prerequisite: SPAN 2312 or equivalent (may be corequisite with consent of instructor). Historical, sociological, and cultural background of Hispano-America. Three credit hours.

SPAN 4311 Literature of the Golden Age
Prerequisite: 3000-level Spanish course. Selected dramatic and prose writings of the Golden Age. Three credit hours.

SPAN 4331 Nineteenth-Century Literature
Prerequisite: 3000-level Spanish course. Readings and criticism of outstanding authors of this period. Three credit hours.

SPAN 4341 Twentieth-Century Literature
Prerequisite: 3000-level Spanish course. Readings of the “Generation of ‘98” and more recent authors. Three credit hours.

SPAN 4351 Spanish American Literature
Prerequisite: 3000-level Spanish course. Reading of works by several representative Latin American authors. Three credit hours.

SPAN 4361, 4362 Seminar in Spanish Literature
Prerequisite: two Spanish literature courses or consent of instructor. Reading, discussion, and critical analysis of selected works from Spanish literature. Three credit hours.

SPAN 4101, 4201, 4301 Independent Study
Prerequisite: consent of instructor. Reading from a selected bibliography in Spanish. Credit is determined at the beginning of the semester by the complexity of the problem and will not be altered. Open only to majors. One, two, or three credit hours.
**SPED 4102, 4202, 4302 Workshop**

**SPED 4301 Education of Exceptional Learners**

Prerequisites: Admission to the Early Childhood Education Program and eligible for admission to Block III with a 2.65 GPA or greater. 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 into activities in the intervention environment and assessments surrounding health and safety issues, children with health and/or sensory impairments, social development, and challenging behavior. Two credit hours.

**SPED 4216 Early Childhood Special Education: Inclusion Field Experience**

This is final experience in a series of supervised field experience designed for students in the Early Childhood Special Education emphasis. The 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. Two credit hours.

**SPED 4300 Methods of Teaching Students with Mild Disabilities**

Prerequisite: PSYC 2300 or consent of instructor. Introduction to the psychological, sociological, philosophical, legal, and educational implications of educating exceptional learners in the mainstream; the role of teachers, professionals, and parents as team members in providing appropriate education and necessary adaptations for exceptional learners. Dual-listed in the Graduate Catalog as SPED 5301. Three credit hours.

**SPED 4102, 4202, 4302 Workshop**

Subjects vary. One, two, or three credit hours.

**SPED 4216 Early Childhood Special Education: Inclusion Field Experience**

This is final experience in a series of supervised field experience designed for students in the Early Childhood Special Education emphasis. The 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. Two credit hours.

**SPED 4301 Education of Exceptional Learners**

Prerequisite: PSYC 2300 or consent of instructor. Introduction to the psychological, sociological, philosophical, legal, and educational implications of educating exceptional learners in the mainstream; the role of teachers, professionals, and parents as team members in providing appropriate education and necessary adaptations for exceptional learners. Dual-listed in the Graduate Catalog as SPED 5301. Three credit hours.

**SPED 4102, 4202, 4302 Workshop**

Subjects vary. One, two, or three credit hours.

**SPED 4216 Early Childhood Special Education: Inclusion Field Experience**

This is final experience in a series of supervised field experience designed for students in the Early Childhood Special Education emphasis. The 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. Two credit hours.

**SPED 4300 Methods of Teaching Students with Mild Disabilities**

Prerequisite: an introductory course in exceptional learners and/or characteristics of students with mild disabilities. Methods and materials for educating students with mild disabilities in regular and special education environments including behavior management, programming for secondary students with mild disabilities, career education, teacher-made materials, and commercially available materials appropriate for use with students with mild disabilities. Three credit hours.

**SPED 4108, 4208, 4308 Independent Study**

Prerequisite: consent of the department chairperson. An in-depth study of a selected problem or trend in special education for advanced students. One, two, or three credit hours.

**SPED 4311 Behavior Management**

Prerequisite: EDEN 2300. Positive approaches to behavior management. Students receive firsthand experience in using behavior analysis in field settings. Dual-listed in the Graduate Catalog as SPED 5311. Three credit hours.

**SPED 4312 Medical Problems in Child Development**

Prerequisites: Admission to the Early Childhood Education Program, and eligible for admission to Block III with a 2.65 GPA or greater. 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. Three credit hours.

**SPED 4313 Early Childhood Special Education Assessment**

Prerequisites: Admission to the Early Childhood Education Program, and eligible for admission to Block III with a 2.65 GPA or greater. The first course in a two-course sequence addressing assessment and early intervention screening and assessment strategies for young children with disabilities, from birth through age 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. Three credit hours.

**SPED 4000 Methods of Teaching Students with Mild Disabilities**

Prerequisite: an introductory course in exceptional learners and/or characteristics of students with mild disabilities. Methods and materials for educating students with mild disabilities in regular and special education environments including behavior management, programming for secondary students with mild disabilities, career education, teacher-made materials, and commercially available materials appropriate for use with students with mild disabilities. Three credit hours.

**SPED 4108, 4208, 4308 Independent Study**

Prerequisite: consent of the department chairperson. An in-depth study of a selected problem or trend in special education for advanced students. One, two, or three credit hours.

**SPED 4311 Behavior Management**

Prerequisite: EDEN 2300. Positive approaches to behavior management. Students receive firsthand experience in using behavior analysis in field settings. Dual-listed in the Graduate Catalog as SPED 5311. Three credit hours.

**SPED 4312 Medical Problems in Child Development**

Prerequisites: Admission to the Early Childhood Education Program, and eligible for admission to Block III with a 2.65 GPA or greater. 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. Three credit hours.

**SPED 4313 Early Childhood Special Education Assessment**

Prerequisites: Admission to the Early Childhood Education Program, and eligible for admission to Block III with a 2.65 GPA or greater. The first course in a two-course sequence addressing assessment and early intervention screening and assessment strategies for young children with disabilities, from birth through age 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. Three credit hours.

**SPED 4315 Early Childhood Special Education: Methods of Inclusion**

This is the second course in a two-course sequence addressing intervention strategies for young children with disabilities, from 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 also will be given to methods of including children with disabilities in the general education setting. Three credit hours.

**SPED 4317 Introduction to Inclusion in Early Childhood Special Education**

Prerequisites: PSYC 1300 or an introductory human development course, admission to the Early Childhood Education Program, and eligible for admission to Block III with a 2.65 GPA or greater; or consent of the instructor. Psychological, Sociological, philosophical, legal, educational implications of educating exceptional learners; necessary adaptations for exceptional learners in the mainstream setting; role of teachers, professionals, parents as team members providing education for exceptional learners. Three credit hours.

**SPED 4369 Speech Reading and Auditory Training**

Prerequisites: AUSP 3362, 4368, or consent of instructor. A study of auditory and visual speech reception, the assessment and training of residual hearing and visual reception by individuals with hearing loss, and the integration of these skills into the rehabilitation process. Appropriate use of personal hearing aids and group amplification systems in educational settings. Three credit hours.
Speech Communication (SPCH)

SPCH 1300 Speech Communication
This course helps students effectively deliver an oral presentation to an adult audience; listen to and critique objectively the oral presentations of others; effectively participate in one-to-one communication experiences using techniques of active listening, conflict resolution, and information gathering; organize, participate in, and lead small groups as they problem-solve; and recognize and use effective oral language as a tool of sound reasoning. Student performance is emphasized along with lecture, discussion, and self-instructional study center exercises. Students learn through writing, reading, discussing, listening, and participating in critical thinking and problem-solving activities. Three credit hours.

SPCH 2134 Listening
Prerequisite: SPCH 2310. An introduction to the knowledge, theory, and skills needed to improve listening. Extensive exercises and tests to promote the learning of productive listening techniques, note taking, and types of listening skills. One credit hour.

SPCH 2140 Applied Communication Ethics
Prerequisite: SPCH 2310. Analysis of ethical issues in communication at multiple levels (interpersonal, small group, organizational, and public speaking). The course offers situations in which students consider the implications of ethical decision making, respond to ethical alternatives and discuss the effects of various responses. One credit hour.

SPCH 2310 Human Communication Concepts
Prerequisite: SPCH 1300. This course provides an overview to the study of human communication. A variety of contemporary approaches to human interaction in interpersonal, small group, organizational, and intercultural situations are reviewed. The focus is on learning the basic terminology and theoretical concepts associated with the general study of communication. Three credit hours.

SPCH 2311 Introduction to Communication Research
Prepares students to understand the research and application focus of a major in communication. Topics include asking good research questions, the role of case studies in communication research, and understanding basic research principles. The focus of this course is to enable students to apply theory in meaningful ways to better understand real life situations. Three credit hours.

SPCH 3121 Parliamentary Procedure
Prerequisite: SPCH 1300. Principles of parliamentary procedure as used in most business and social organizations. Programmed cognitive learning and simulated practice in mock meetings. One credit hour.

SPCH 3300 Interpersonal Communication
Prerequisite: SPCH 1300. Enhances the student's ability to understand and participate in effective interpersonal communication. Topics include verbal and nonverbal communication, relational management, self-concept, and relationship roles. Focus on using major interpersonal theories and concepts, as well as in-class activities to develop a heightened awareness of relationship issues, as well as interpersonal communication competence. Three credit hours.

SPCH 3315 Gender Communication
An examination of gender as it influences verbal and nonverbal interaction between men and women. Topics include the ways communication in families, school, media, and society creates and perpetuates gender roles, and how socially-created gender differences in public and private setting affect success, satisfaction, and self-esteem. Focus on using major gender communication theories and concepts to develop a heightened awareness of gender issues that relate to human interaction. Three credit hours.

SPCH 3316 Interviewing
Prerequisite: SPCH 1300. This course develops the student's ability to effectively prepare for and participate in a variety of interview situations. Topics include impression management, rapport building, interview organization, effective questions and answers, and effective listening. Types of interviews covered include employment, probing, survey, persuasive, selection, performance counseling, and health care. The focus is on using in-class activities to develop effective interviewing skills. Three credit hours.

SPCH 3320 Advanced Public Speaking
Prerequisite: SPCH 1300. This course develops the student's ability to effectively prepare and deliver a speech. Topics include audience analysis, critical thinking and listening, the use of supporting materials and visual aids, and the development of presentation skills. The focus is on using in-class activities to develop effective research, organization, and presentation skills. Three credit hours.

SPCH 3322 Small Group Communication
Prerequisite: SPCH 1300. This course develops the student's ability to effectively communicate in small groups or teams. Topics include group formation, group leadership, effective listening in groups, techniques of problem solving, group norms, effective group participation, and management of group conflict. The focus is on using in-class and group activities to develop effective small-group interaction skills and group presentation skills. Three credit hours.

SPCH 3323 Conflict Management
Prerequisite: SPCH 1300. Development of the student's ability to effectively manage conflict in organizations, groups, and personal relationships. Topics include styles, patterns, and systems of conflict as well as conflict management techniques of negotiation, and mediation. The focus is on using in-class activities to better understand the factor and dynamics of conflict resolution and develop effective conflict management skills. Three credit hours.

SPCH 3330 Professional Communication
Prerequisite: SPCH 1300. Development of the student's ability to effectively interact in professional business situations. Topics include listening, coaching/mentoring, dealing with difficult people, delegation, formal and informal communication, civility, and customer service. Focus on using in-class activities to develop effective professional communication skills. Three credit hours.

SPCH 3340 Communication Ethics for the Professional
Prerequisite: SPCH 1300. This course explores the common ethical questions encountered in business and professional settings. Topics include whistle blowing, employee rights, public relations, ethical codes, sexual harassment, leadership ethics, and organizational legitimacy. The focus is on illustrating the importance of ethics to the professional through practical applications of communication-based principles. Three credit hours.

SPCH 3350 Nonverbal Communication
Prerequisite: SPCH 1300. Examination of codes of nonverbal communication within personal, interpersonal, and professional contexts. Topics include the functional perspective of nonverbal communication; factor of appearance, body language, space, touch, paralanguage, artifacts, and time; interpersonal attributes; credibility; dominance; and impression management. Focus on using major nonverbal communication theories and concepts to develop a heightened awareness of the role of non-verbs in human interaction. Three credit hours.

SPCH 4110 Senior Presentation
Prerequisite: SPCH 4300. Development and presentation of a major work done in the senior seminar. Part of the speech communication major capstone sequence. One credit hour.

SPCH 4100, 4201 Independent Study
Prerequisite: SPCH 1300. These courses provide students with an opportunity to read and conduct research in a selected area of speech communication studies. Projects and papers must be approved by the instructor prior to registration. One or two credit hours.

SPCH 4300 Senior Seminar
Prerequisites: SPCH 2310, Speech 2310, and 15 hours in speech communication. Application of human communication theory to real situations. Topics include research the production, both quantitative and qualitative research approaches, as well as questions of research ethics. Focus on identifying the practical applications of research methods for organizational members. Dual-listed in the UALR Graduate Catalog as SPCH 5310. Three credit hours.

SPCH 4310 Investigations into Communication Research
Prerequisite: SPCH 1300 and 4300. Examination of the applied role of communication research methods in a variety of contemporary organizations. Topics include the research process, both quantitative and qualitative research approaches, as well as questions of research ethics. Focus on identifying the practical applications of research methods for organizational members. Dual-listed in the UALR Graduate Catalog as SPCH 5310. Three credit hours.

SPCH 4311 Organizational Communication
Prerequisite: SPCH 2310. Examination of organizational communication theories, communicative implications of historical and modern management theories, as well as special interest topics. Major topics include cultural and critical approaches to organizational communication, classical management and human relations theory, and communication effectiveness. Special topics may include teams in organizations, diversity, organizational politics, leadership and change. Focus on applying organizational communication theories and concepts to understand others better and to control one's own communication in organizations. Dual-listed in the UALR Graduate Catalog as SPCH 5311. Three credit hours.

SPCH 4312 Intercultural Communication
Prerequisites: SPCH 1300. Examination of culture as it influences human interaction in a wide range of contexts, including work, medical, interpersonal and political. Topics include culture shock, language, nonverbal, intercultural conflict, and culture and the media. Focus on using major intercultural communication theories and concepts, as well as in class activities to develop a heightened awareness of intercultural issues, as well as intercultural communication competence. Dual-listed in the UALR Graduate Catalog as SPCH 5312. Three credit hours.

SPCH 4313 Seminar: Topics in Communication
Prerequisites: SPCH 2310. Investigation of timely communication theories, skills, and practices. Topics selected from a variety of theoretical or practical perspectives. 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 UALR Graduate Catalog as SPCH 5313. Three credit hours.
SPCH 4314 Internship
Prerequisites: SPCH 1300. An opportunity to apply communication concepts and skills in a professional setting within the department. Interns gain experience working in the Speech Communication Interactive Learning Center, assisting in its operation primarily with students in the basic course. Focus is on experiencing and analyzing communication in real-world situations. Contact the department’s basic course coordinator before enrolling in this course. Three credit hours.

SPCH 4315 Cooperative Education in Speech Communication
Prerequisite: SPCH 1300. An opportunity to apply communication concepts and skills in a professional setting outside the department. Focus us on experiencing and analyzing communication in real-world situations. Contact the department’s coordinator of cooperative education before enrolling in this course. Three credit hours.

SPCH 4320 Public Address: Speakers and Audiences
Prerequisite: SPCH 2310. History and criticism of United States speakers and speeches that reflect dominant social and political ideas in United States history. Three credit hours.

SPCH 4321 General Semantics
Prerequisite: SPCH 2310. Comprehensive examination of the way human beings use word symbols to define themselves, verbally map their environment, describe the past, and project the future. Study of the distortions that can occur between symbolic representation and actual events, the impact of this disparity on human behavior, and the means of adjustment. Survey of the origins of spoken symbols and the process of developing symbol systems. Three credit hours.

SPCH 4323 Family Communication
Prerequisite: SPCH 1300. Examination of long-term relationships within a family context from a speech communication perspective, primarily examining behaviors that occur in a functional family. Topics include family rules and roles, conflict styles, power, and decision-making. Focus is on using major family communication theories and concepts to help the student analyze the communication system of a family and identity communication patterns, problems, and dilemmas in the families. Three credit hours.

SPCH 4324 Organizational Communication II
Prerequisite: SPCH 1300. Special topics in organizational communication including but not limited to organizational identification, risk and issue management, organizational change, or critical approaches to organizational communication. Focus on giving students an in-depth understanding of a specialized aspect of organizational communication. Dual-listed in the UALR Graduate Catalog as SPCH 5324. Three credit hours.

SPCH 4550 Effective Crisis Communication
This course investigates and analyzes instances of effective and ineffective crisis communication. Students will examine the internal organizational processes and the larger environment within which various organizations exist focusing on issues such as stakeholders, legal environments, and the larger social and cultural contexts. Dual-listed in the UALR Graduate Catalog as SPCH 5550. Five credit hours.

Statistics (STAT)

STAT 2350 Introduction to Statistical Methods
Prerequisite: MATH 1302 or 1315 or equivalent. Introduction to the fundamental ideas of statistics, including descriptive statistics, normal distributions, sampling experiments, tests of hypotheses, and elementary probability. This course cannot be applied as upper-level credit toward a major in mathematics. Three hours lecture. Three credit hours.

STAT 3350 Introduction to Probability
Prerequisite: a grade of C or greater in MATH 1305. Combinatorial theory, random variables, continuous and discrete distributions, expected value, jointly distributed random variables, conditional expectation, law of large numbers, central limit theorem. Three hours lecture. Three credit hours.

STAT 3351 Statistical Inference
Prerequisite: a grade of C or greater in STAT 3350. Point estimation, interval estimation, tests of statistical hypotheses, distribution free methods, regression, order statistics. Three hours lecture. Three credit hours.

STAT 3352 Applied Statistics I
Prerequisite: a grade of C or greater in MATH 1305, 1342, or 1312. Measures of central tendency and variation, probability distributions, sampling distributions, tests of hypotheses, confidence intervals. Three hours lecture. Three credit hours.

STAT 3353 Applied Statistics II
Prerequisites: a grade of C or greater in STAT 3352, knowledge of a scientific programming language. Analysis of variance, factorial experiments, unequal subclases, multiple regression and correlation, analysis of covariance, uses of chi-square tests, tests of independence, goodness of fit. Three hours lecture. Three credit hours.

STAT 4352 Distribution-Free Statistical Methods
Prerequisite: a grade of C or greater in STAT 3352 or its equivalent. Comparison of classical and distribution-free tests of hypotheses, test assumptions, efficiency and related characteristics, Fisher’s method of randomization, ranking tests, tests based on the binomial distribution. Three hours lecture. Three credit hours.

STAT 4354 Design and Analysis of Experiments
SYEN 3101 Introduction to Computer Systems
Prerequisite: consent of instructor. Introduction to the fundamental hardware and software underpinning of computing systems; MOS transistors, logic gates, latches, logic structure, memory, von Neumann model of execution, organization and architecture of a simple computer machine, assembly, and high-level language programming. Required for systems engineering students in the computer systems option, but open to all students on a space-available. Two hours lecture, two hours lab. Three credit hours.

SYEN 3102 C/C++ Programming for Engineers and Scientists

SYEN 3103 Introduction to Telecommunication Systems
Prerequisite: consent of instructor. Transmission fundamentals, communication networks, protocols and the TCP/IP suite, antennas and propagation, signal encoding techniques, spread spectrum, coding and error control, satellite communications, cellular wireless networks, cordless systems and wireless local loop, mobile IP and wireless LAN technology, and IEEE 802.11 wireless LAN standard, and bluetooth technology. Required for systems engineering students in the telecommunication systems option, but open to all students on a space-available basis. Two hours lecture, two hours lab. Three credit hours.

SYEN 3104 Introduction to Electrical Systems
Prerequisite: consent of instructor. Direct current fundamentals; alternating current and components; electronic components and devices; digital logic components; computer architecture; computer components; semiconductors; the load line; CMOS logic and memory; other semiconductor devices and circuits; fabrication of ICs and MEMS; power generation, transmission, and distribution; wireless communication systems; digital signal processing; electronics terminology. Required for systems engineering students in the computer systems in the students in the electrical systems option, but open to all students on a space-available basis. Two hours lecture, two hours lab. Three credit hours.

SYEN 3105 Introduction to Mechanical Systems
Prerequisite: consent of instructor. The mechanical engineering profession; problem-solving skills; mechanical components and tools; forces in structures and fluids; materials and stresses; thermal and energy systems; motion of machinery; mechanical design. Required for systems engineering students in the mechanical systems option, but open to all students on a space-available basis. Two hours lecture, two hours lab. Three credit hours.

SYEN 2115 Circuits and Systems Laboratory
Prerequisite or corequisite: SYEN 2315. Structured exercises to illustrate class topics. Both SPICE simulation and breadboarding/measurement exercises. Use of spectrum analyzer to obtain frequency response and system identification. Two hours lab. One credit hour.

SYEN 2310 Systems Modeling - Discrete
Prerequisite: MATH 1452. Introduction to dynamic modeling, converting real world problems into mathematical models, discrete dynamical system models with examples from economics, computer science, and engineering, systems with inputs, probabilistic modeling with discrete systems. Three hours lecture. Three credit hours.

SYEN 2315 Circuits and Systems

SYEN 3110 Dynamic Systems Modeling and Simulation Laboratory
Prerequisite or corequisite: SYEN 3310. Modeling and simulation of dynamic systems on personal computers. Introduction to computer modeling. Graphical presentation of results. Two hours lab. One credit hour.

SYEN 3130 Digital Systems Laboratory
Prerequisite or corequisite: SYEN 3330. Weekly laboratory providing practical knowledge in designing, assembling, testing, and simulating combinational and sequential digital circuits. Two hours lab. One credit hour.

SYEN 3134 Advanced Microprocessor Systems Laboratory
Prerequisite or corequisite: SYEN 3334. Laboratory course to accompany SYEN 3334 Advanced Microprocessor Systems. Two hours lab. One credit hour.

SYEN 3150 Signals and Systems Laboratory
Prerequisite or co-requisite: System Engineering 3350. Laboratory course to accompany SYEN 3350 Signals and Systems. Two hours lab. One credit hour.

SYEN 3152 Analog and Digital Electronics Laboratory
Prerequisite or corequisite: SYEN 3352. Laboratory course to accompany SYEN 3352 Analog and Digital Electronics. Two hours lab. One credit hour.

SYEN 3154 Communication Systems Lab
Prerequisite or corequisite: SYEN 3354. Weekly laboratory experiments to accompany Communication Systems I. Two hours lab. One credit hour.

SYEN 3160 Dynamic Systems Modeling and Simulation
Prerequisites: MATH 3312 and 3322. Introduction to mathematical modeling of dynamic systems, continuous and discrete system models, system response in time and frequency domains, transfer functions, stability characterization, state-space formulation of modeling problems, fitting models to data, examples from electrical, mechanical, and environmental systems. Three credit hours.

SYEN 3160 Optimization Methods in Engineering
Prerequisites: MATH 2453, 3312. Foundation of linear programming, non-linear programming, integer programming, dynamic programming, discrete time optimal control, continuous time optimal control, and artificial intelligence (AI) techniques for solving optimization problems. Three hours lecture. Three credit hours.

SYEN 3161 Probability Theory and Random Signals
Prerequisite: MATH 2453. Introduction to probability, joint and conditional probabilities, Bayes’ theorem, Bernoulli trials, random variable, distribution and density functions, expectation and moments, multiple random variables, joint distribution and density, random processes, stationarity and independence, correlation functions, spectral characteristics, linear systems with random inputs, statistical parameter estimation, fitting models to data. Three hours lecture. Three credit hours.

SYEN 3162 Discrete Event Systems Modeling and Simulation
Prerequisites: SYEN 3314. The theory and practice of discrete-event simulation modeling and analysis, discrete-event dynamic systems (DEDS), simulation logic and data structures, random number generation, computational issues, event driven design, output analysis, model verification and validation, and modern simulation languages including animation. Three hours lecture. Three credit hours.

SYEN 3164 Decision and Risk Analysis
Prerequisite: SYEN 2315 and 5314. A study in analytic techniques for rational decision-making. Address uncertainty, conflicting objectives, and risk attitudes. Modeling uncertainty; rational decision-making principles; representing decision problems with value trees, decision trees, and influence diagrams; solving value hierarchies, decision trees and influence diagrams; defining and calculating the value of information; incorporating risk attitudes into the analysis; and conducting sensitivity analyses. Three hours lecture. Three credit hours.

SYEN 3330 Digital Systems
Prerequisites: SYEN 1302, 2315. An introduction to digital system design necessary to do modern digital design. Exposure to a balanced treatment of logic design, digital system design, and computer system design basics. New practices that cover class design and in-circuit testing and their influence into the discussion for a real-world viewpoint of modern computer systems. Three hours lecture. Three credit hours.

SYEN 3332 Communication Networks
Prerequisites: SYEN 3312, 3314, 3316. Comprehensive study of the major communication networks: data, telephone, cable TV, and wireless; network architectures, protocols, control, and economics; packet-switched networks: Ethernet, internet, and TCP/IP; circuit-switched networks: SONET, DWDM, and DSL; ATM networks: quality of service, IP-over-ATM; wireless networks; optical networks; modeling and simulation of networks: parallel, cluster, and grid computing. Three hours lecture. Three credit hours.

SYEN 3334 Advanced Microprocessor Systems
Prerequisite: SYEN 3330. The 8086 Intel series of microprocessors (from the 8086 to the Pentium members of the series). Principles of microprocessor system design, architecture, and interfacing. Design and simulation of microprocessors and microcomputers using the assembly language for the architecture. Three hours lecture. Three credit hours.

SYEN 3350 Signals and Systems
Prerequisites: MATH 2453, 3322. Linear system theory, convolution, sampling, Fourier transforms, Laplace transforms, digital filtering. Three hours lecture. Three credit hours.

SYEN 3351 Network Analysis
Prerequisites: SYEN 2315 and 2115. Basic circuit laws; circuit analysis methods; capacitive and inductive transients and equivalent circuits; initial, final, and first-order circuits; Laplace transforms and circuit analysis with Laplace transforms; transfer functions; sinusoidal steady-state analysis; frequency response analysis and Bode plots; waveform analysis; Fourier analysis. Three hours lecture. Three credit hours.

SYEN 3352 Analog and Digital Electronics
Prerequisite: SYEN 2315 and 2115. Electronic systems: measurement sensors and actuators; amplification; feedback; semiconductors and diodes; field effect transistors; bipolar junction transistors; analog signal processing; digital systems; sequential logic; digital devices; microcomputers; data acquisition and conversion; system design. Three hours lecture. Three credit hours.

SYEN 3354 Communication Systems
Prerequisites: SYEN 3314 and 3350. Introduction to communication systems, signals and spectra, signal transmission over communication channels, filtering, linear and exponential CW modulation, sampling, pulse modulation, random signals, noise in communication systems. Three hours lecture. Three credit hours.
SYEN 3356 Electromagnetic Fields and Waves
Prerequisites: SYEN 2315 and MATH 2453. Vector algebra and vector calculus; electrostatics, magnetostatics, Maxwell’s equations for time-varying fields, plane-wave propagation, emission, reflection; antenna design; transverse and transmission; radiation and antennas. Three hours lecture. Three credit hours.

SYEN 3358 Fundamentals of Power Systems
Prerequisites: SYEN 3356. Electrical machines: generators, motors, and transformers; electrical and electronic drives: motor control and power electronics; electric power systems: generation, transmission, distribution, and utilization of electricity. Three hours lecture. Three credit hours.

SYEN 3360 Data Communications
Prerequisites: SYEN 1302 and 2310. Introduction to principles of digital transmission systems for computer and telecommunication networks: data transmission, transmission media, communication standards. Communication media and signal encoding schemes; point-to-point communication standards; OSL model, layering concepts; data-link, network, and transport layer protocols; error control, congestion control, and routing algorithms; TCP/IP protocol; networking over the internet. Three hours lecture. Three credit hours.

SYEN 3362 Algorithm Design
Prerequisites: SYEN 1302, 3312, and 3314. Design, analysis, and implementation of algorithms important to computer systems and telecommunication systems; algorithmic design patterns and frameworks; data structures; combinatorial algorithms; graph algorithms; geometric algorithms; numerical algorithms; and internet algorithms, including text processing, cryptography, and network algorithms. Three hours lecture. Three credit hours.

SYEN 3364 Introduction to Control Systems Engineering
Prerequisite: SYEN 3310. Introduction to control systems, physical system modeling, transfer functions, difference equations, and state-space models; analog and digital signal processing; stability analysis, performance criteria, root-locus techniques, frequency-response techniques, cascade controller design, pole placement design, techniques for nonlinear, discrete-event, and sampled-data systems, design examples. Three hours lecture. Three credit hours.

SYEN 3370 Statics and Dynamics
Prerequisites: SYEN 1305; MATH 2453, 3312, and 3322. Statics of particles, rigid bodies, equivalent systems of forces, equilibrium, centroids and centers of gravity, analysis of structures, forces in beams and cables, friction, moments of inertia, method of virtual work, kinematics of particles, Newton’s Second Law; energy and momentum methods, systems of particles, kinematics of rigid bodies, plane motion of rigid bodies, forces and accelerations, kinetics of rigid bodies in three dimensions, mechanical vibrations. Three hours lecture. Three credit hours.

SYEN 3372 Engineering Materials
Prerequisites: SYEN 3370. Atomic structure and bonding, crystal structures, crystal geometry, solidification, crystal imperfections, and diffusion in solids, mechanical properties of metals, polymeric materials, phase diagrams, engineering alloys, ceramics, composite materials, corrosion, electrical properties of materials, optical properties and superconductive materials, magnetic materials. Three hours lecture. Three credit hours.

SYEN 3391 Cooperative Education in Systems Engineering I
Prerequisites: declaration of systems engineering major, completion of at least 60 hours total credit hours with an overall GPA of 2.5 or higher, completion of 20 or more credit hours of systems engineering courses with a GPA of 2.5 or higher, and permission of the systems engineering cooperating education faculty coordinator. This course is for qualified students who would like to combine classroom study with at least 200 hours of engineering-related paid employment. The course is a partnership between the student, the employer, the cooperating education faculty, and the UALR Office of Cooperative Education. An individualized Cooperative Education Learning Agreement will specify the detailed work assignment, including employer, supervisor, job title, work schedule, and rate of pay, as well as the credit hours assigned, including learning objectives, learning activities, documentation of learning, learning assessments, and grading policy. This course will be allowed to satisfy up to six hours of program electives. Three credit hours.

SYEN 4174 Fluid Mechanics Laboratory
Prerequisite or corequisite: SYEN 4174. Analysis of experimental data, basic electrical measurements and sensing devices, pressure measurement, fluid measurement, temperature measurement, data acquisition and processing, reporting and presentation, design of experiments. Two hours lab. One credit hour.

SYEN 4176 Mechanics of Materials Laboratory
Prerequisite or corequisite: SYEN 4176. Analysis of experimental data, basic electrical measurements and sensing devices, force measurement, torque measurement, strain measurement, motion measurement, vibration measurement, data acquisition and processing, report writing and presentation, design of experiments. Two hours lab. One credit hour.

SYEN 4320 Linear System Theory
Prerequisites: SYEN 3364, MATH 3312. Linear discrete and continuous time systems, transfer functions, convolution integrals, state equations, optimal and control systems, linear quadratic regulator, Kalman filters. Three credit hours.

SYEN 4325 Fuzzy Logic in Control and Systems Engineering
Prerequisite: SYEN 3364. Introduction, basic concepts of fuzzy logic, fuzzy sets, fuzzy relations, fuzzy if/then rules, fuzzy implications and approximate reasoning, fuzzy logic in control theory, fuzzy logic applications in information systems, fuzzy model identification, neuro-fuzzy systems and genetic algorithms. Dual-listed in the UALR Graduate Catalog as SYEN 5325. Three hours lecture. Three credit hours.

SYEN 4329 Robust and Optimal Control
Prerequisite: SYEN 4320. Fundamentals of linear systems, signal and system spaces, power and spectral norms, feedback structure, internal stability, coprime factorization, Bode’s gain and phase relations, observability, controllability, balanced realizations, model reduction, model uncertainty, small gain theorem, control and observations of stabilizing controllers, H2 optimal control, synthesis of state feedback via LMs, and H2 control, and uncertain systems. Dual-listed in the UALR Graduate Catalog as SYEN 5329. Three hours lecture. Three credit hours.

SYEN 4330 Computer Architecture
Prerequisites: SYEN 3330, 3310. Design principles for computer systems. Number representations, descriptions for computer arithmetic, computer system organization, control structures, including microprogrammed control, memory organization, input/output structures, and introduction to parallel processing. Dual-listed in the UALR Graduate Catalog as SYEN 5330. Three hours lecture. Three credit hours.

SYEN 4332 Applied Operating Systems
Prerequisite or corequisite: SYEN 4330. Introduction to operating systems. Processing, physical input/output, and file management. Multiprogramming and multiprocessor systems; memory management, protect and virtual memory. Process management and scheduling. Device management and scheduling. Process communication, network communication, and protection. Three hours lecture. Three credit hours.

SYEN 4334 Software System Engineering
Prerequisites: SYEN 1306, 3316, and 3318. 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. Three hours lecture. Three credit hours.

SYEN 4340 Applied Numerical Methods
Prerequisites: MATH 3312 and 3322. MATLAB fundamentals and programming, roundoff and truncation errors, roots of equations, systems of linear algebraic equations, curve fitting, polynomial interpolation, numerical integration, ordinary differential equations, and eigenvalues. Three hours lecture. Three credit hours.

SYEN 4343 Networks and Combinatorial Optimization
Prerequisites: SYEN 3312 or consent of the instructor. An in-depth study of combinatorial programming and network flow optimization. Emphasis on discrete optimization and specialized solution techniques that are efficient way to solve mixed-integer programming problems. Techniques include minimum cost flow, networks with gain, multi-commodity flow networks, networks with side constraints and Lagrangian relaxation. Computational complexity is also discussed. Dual-listed in the UALR Graduate Catalog as SYEN 5343. Three hours lecture. Three credit hours.

SYEN 4350 Digital Signal Processing
Prerequisites: SYEN 3350 and 3352. Signals and signal processing; discrete-time signals and systems in the time and frequency domains; digital processing of continuous-time signals; finite-length discrete transforms; discrete-time signals and systems in the s-domain; LTI discrete-time systems in the transition domain; digital filter structures; IIR digital filter design; FIR digital filter design; DSP algorithm implementation; analysis of finite word-length effects; multirate DSP fundamentals; multirate filters banks and wavelets; applications of DSP. Three hours lecture. Three credit hours.

SYEN 4353 Advanced Digital Communications
Prerequisites: SYEN 3154, 3354. In-depth examination of wireless digital communication design strategies. Topics covered include digital modulation, radiowave 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, method 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 issue in which transmit and receive implementation affect system performance. Dual-listed in the UALR Graduate Catalog as SYEN 5353. Three hours lecture. Three credit hours.

SYEN 4355 Mobile Multimedia Internet
Prerequisites: SYEN 3314. 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 UMTS, and VoIP. Topics covered will involve architecture of the systems, protocol issues, the design and analysis of solutions mobility, quality of service, mobile IP, and standardization efforts. Three hours lecture. Three credit hours.
SYEN 4356 Electromagnetic Waves and Antennas

SYEN 4357 Antennas and Propagation
Prerequisites: SYEN 4356. Antenna basics; the antenna family; point sources; arrays of point sources; the electric dipole and thin linear antennas; the loop antenna; end-fire antennas; slot, patch, and horn antennas; flat sheet, corner, and parabolic reflector antennas; broadband and frequency-independent antennas; antenna temperature, remote sensing, and radar cross-section; self and mutual impedances; the cylindrical antenna and the moment method; arrays of dipoles and of apertures; lens antennas; special antennas. Three hours lecture. Three credit hours.

SYEN 4358 Communication Systems II
Prerequisites: SYEN 4356. Examples of digital data transmission, pulse code modulation, M-ary communication, multiplexing, digital CW modulation, noise, optimum signal detection, information theory, error correcting codes, spread spectrum communication, satellite and wireless communication. Three hours lecture. Three credit hours.

SYEN 4366 Advanced Digital Systems
Prerequisites: SYEN 3330, 3310. Advanced design principles for digital systems. 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. Dual-listed in the UALR Graduate Catalog as SYEN 5366. Three hours lecture. Three credit hours.

SYEN 4374 Fluid Mechanics
Prerequisites: SYEN 3370. Properties of fluids, pressure and fluid statics, fluid kinematics, Bernoulli and energy equations, momentum, dimensional analysis, flow in pipes, differential analysis, approximations of the Navier-Stokes equation, drag and lift, compressible flow, open-channel flow, turbomachinery, computational fluid dynamics (CFD). Three hours lecture. Three credit hours.

SYEN 4376 Mechanics of Materials
Prerequisites: SYEN 3372. Stress, strain, axial loading, torsion, pure bending, analysis and design of beams, shearing stresses in beams and thin-walled members, transformation of stress and strain, principal stresses, deflection of beams, columns, energy methods. Three hours lecture. Three credit hours.

SYEN 4378 Engineering Thermodynamics
Prerequisites: SYEN 4374. Properties of pure substances, First Law of Thermodynamics, closed systems, control volumes, Second Law of Thermodynamics, entropy, exergy, gas power cycles, vapor and combined power cycles, refrigeration cycles, thermodynamic property relationships, gas mixtures, gas-vapor mixtures and air conditioning, heat transfer by conduction, convection, and radiation. Three hours lecture. Three credit hours.

SYEN 4379 Heat Transfer
Prerequisite: SYEN 4378. Introduction to conduction, steady-state conduction, transient conduction, introduction to convection, external flow, internal flow, natural convection, boiling and condensation, heat exchangers, introduction to radiation, radiation processes and properties, radiation exchange between surfaces. Three hours lecture. Three credit hours.

SYEN 4380 Heating, Ventilating, Air Conditioning, and Refrigeration Systems
Prerequisite: SYEN 3879. Air conditioning systems, ASHRAE standards, properties of moist air, air conditioning processes, comfort and health, indoor environmental quality, heat transmission in buildings, space heating load, solar radiation, cooling load, energy calculations, building simulation, pumps and piping design, space air diffusion, fans and building air distribution, direct contact heat and mass transfer, extended surface heat exchangers, refrigeration. Three hours lecture. Three credit hours.

SYEN 4381 Thermal and Fluid System Design
Prerequisite: SYEN 379. 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-feedwater system, the circulating-water system, gas turbine and combined cycles, principles of nuclear energy, nuclear reactors and power plants, geothermal energy, solar energy, wind energy, energy from the oceans, energy storage and fuel cells, environmental aspects of power generation. Three hours lecture. Three credit hours.

SYEN 4382 MEMS and Microsystems
Applications: SYEN 2315, 3372, and 4378. Overview of MEMS and microsystems, applications, working principles of microsystems, engineering science for microsystem design and fabrication, engineering mechanics for microsystem design, thermofluid engineering and microsystem design, scaling laws in miniaturization, materials for MEMS and microsystems, microsystem fabrication processes, overview of micromanufacturing, microsystems design, microsystems modeling and simulation, microsystem packaging, overview of nanoscience and nanotechnology. Three hours lecture. Three credit hours.

SYEN 4383 Finite Element Analysis
Prerequisite: SYEN 4340, 4376, and 4378. 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. Three hours lecture. Three credit hours.

SYEN 4385 Systems Engineering Capstone Design I
Prerequisite: completion of at least 40 credit hours of SYEN courses. First semester of systems engineering capstone design sequence. Focuses on the requirements definition process and involves designing a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, using appropriate engineering standards. Students work in multidisciplinary teams on system engineering design projects and make formal written and oral presentations of their preliminary work. Three hours lecture. Three credit hours.

SYEN 4386 Systems Engineering Capstone Design II
Prerequisite: SYEN 4385. Second semester of systems engineering capstone design sequence. Focuses on the solution definition process and involves designing a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, using appropriate engineering standards. Students work in multidisciplinary teams on system engineering design projects and make formal written and oral presentations of their preliminary work. Two hours lecture, two hours lab. Three credit hours.

SYEN 4391 Cooperative Education in Systems Engineering II
Prerequisites: SYEN 3391, an overall GPA of 2.5 or higher, completion of 40 or more credit hours of systems engineering courses with a GPA of 2.5 or higher, and permission of the systems engineering cooperative education faculty coordinator. This course is for qualified students who would like to combine classroom study with at least 200 hours of engineering-related paid employment. The course is a partnership between the student, the employer, the systems engineering faculty, and the UALR Office of Cooperative Education. An individualized Cooperative Education Learning Agreement will specify the detailed work assignment, including employer, supervisor, job title, work schedule, and rate of pay, as well as the academic requirements, including learning objectives, learning activities, documentation of learning, learning assessments, and grading policy. This course will be allowed to satisfy up to six hours of program electives. Three credit hours.

SYEN 4399 Special Topics
Prerequisite: consent of instructor. Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability. Dual-listed in the UALR Graduate Catalog as SYEN 5199, 5299, 5399, 5499. One, two, three, or four hours lecture. Offered as a one, two, three, or four credit hours course.
Teacher Education (TCED)

TCED 1104 Introduction to K-12 Computing
An organized approach to computing practices for K-12 educators. One credit hour.

TCED 1200 Orientation to Teaching
Provide opportunities for students to observe in educational settings at the early childhood (preschool and primary levels) and middle childhood/early adolescence levels. Acquisition of understanding of the nature of the profession and its responsibilities to determine whether they are prepared to make a commitment to this profession. Students assisted in completing applications to licensure programs during this semester, should they decide to continue. Two credit hours.

TCED 3105 K-12 Technology Integration for the Math/Science Curriculum
A systematic design for integrating electronic instructional technology into the math/science curriculum for early childhood, elementary, middle, and secondary schools. Three credit hours.

TCED 3106 K-12 Technology Integration for Literacy
A systematic design for integrating electronic instructional technology into the literacy curriculum for early childhood, elementary, middle, and secondary schools. One credit hour.

TCED 3250 Computer Applications in Middle School
Prerequisite: TCED 1104. Applications of technology in the educational setting with specific emphasis on integrating instructional technology into the middle school curriculum. Two credit hours.

TCED 4100, 4200, 4300 Workshop
Prerequisite: consent of instructor (based on student’s experience and course work in the educational area). Designed to provide an opportunity for pre-service and in-service teachers to explore areas of interest and prepare educational materials through a workshop format. One, two, or three credit hours.

TCED 4104 Electronic Portfolio Development
Prerequisites: LSTE 3105 and 3106. The technology skills needed to develop an electronic portfolio. Each student required to demonstrate design skills for incorporating audio, visuals, and motion. Each student produces an electronic portfolio utilizing a current computer multimedia software program and translate or convert that product into language compatible with the World Wide Web. LSTE 4104 is a part of the professional semester of the early childhood education program. Students enrolling in this course must be admitted to the professional semester. One credit hour.

TCED 4301 Introduction to Instructional Technology
Prerequisite: EDFN 2300. The selection, use, and creation of 10 different types of fundamental media software found in today’s educational institutions. The student is required to teach a single unit using media created within the media center laboratory. Three credit hours.

TCED 4320 Interactive Technology for Middle School
The production and application of Interactive Instructional units where the microcomputer is the controlling medium for such peripherals as CD-ROM players and web browsers.

TCED 4600 Clinical Experience/Student Teaching
Prerequisites: 12 credit hours of education courses at UALR, admission to the professional semester. Provides supervised experience in school settings during which the student participates in planning classroom activities. During the semester, students return to campus periodically for additional lectures and demonstrations to refine instructional skills necessary for effective teaching. Six credit hours.

Teaching Students who are Deaf or Hard of Hearing (TDHH)

TDHH 4301 Foundations of Education for Deaf and Hard of Hearing Students
This foundations course is a broad-based introductory course to the profession of teaching students who are deaf or hard of hearing. This course articulates the historical background, philosophical approaches, and current trends, problems, and issues in the education of the deaf and hard of hearing. An overview of the psychological, emotional, and educational problems of the deaf and hard of hearing is included. Knowledge of contemporary educational processes and programs for deaf or hard of hearing infants, children, and adolescents are incorporated into the course content. Dual-listed in the UALR Graduate Catalog as TDHH 5301. Three credit hours.
Urban Studies (URST)

**URST 3505 Study of the City**
Investigation of the city from the vantage of time (ancient to modern) and various academic disciplines, such as politics, sociology, anthropology, and history. Course explores the function of cities, both the changing and constant meaning of cities for humankind, and compares the modern American urban experience with others. Course offers methodological and substantive urban perspectives.

**URST 4302 Independent Study**
Prerequisite: consent of the instructor. Focuses multidisciplinary backgrounds on the problem of the urban area. Projects reflect interests and career objectives along with departmental objectives. Three credit hours.

**URST 4305 Urban Design**
Analyzes the evolution of the physical city with particular focus on issues surrounding livability. The planning and urban design factors which have influenced the city’s growth and change through time will also be emphasized.

**URST 4308 Topics in Urban Studies**
Prerequisite: consultation with the program director. A capstone experience for the urban studies and design minor. In depth study of actual community projects with multidisciplinary teams of students and community professionals in a studio setting, providing a real-world experience for the student while offering concepts for the community. Focus projects are identified and involve resident groups and neighborhood advocates from the project area as appropriate. Open to a wide range of the student’s interests, such as political science, sociology, urban psychology, etc., based on the concept and positive results of a multidisciplinary experience. Dual-listed in the UALR Graduate Catalog as URST 5308. Three credit hours.

**URST 4356 Urban Policy and Government**
[See course description for POLS 4356 Urban Policy and Government]