University of Arkansas Catalog of Studies, 2006-2007

University of Arkansas, Fayetteville

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Welcome to the University of Arkansas

This catalog of studies is a comprehensive reference for your years of study – a list of degrees and courses offered at the University of Arkansas. In addition, it gives you valuable information such as suggested and required degree plans and information about costs, scholarships and financial assistance, and campus resources. Read it with pleasure and with care.

Take every opportunity to consult your academic adviser to ensure that you are taking advantage of courses and University resources that will help you reach your educational and career goals and graduate on time. If you are not sure where to find your academic adviser, contact the dean’s office of your college; the phone numbers are listed on the preceding page. If your major is “undecided,” contact the advising office in the J. William Fulbright College of Arts and Sciences at 479-575-3307. Otherwise, call the dean’s office in the college or school of your interest.

Remember, the University of Arkansas is committed to your success. The faculty and staff are here to support you as you work to achieve your goals. Ask for help and advice whenever you need it.

The University of Arkansas is committed to the policy of providing educational opportunities to all qualified students regardless of their economic or social status and will not discriminate on the basis of race, color, sex, creed, sexual orientation, disability, veteran’s status, age, marital or parental status, or national origin.
Fayetteville, Arkansas

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A limited number of copies may be available through the Office of Admissions, University of Arkansas, 200 Hunt Hall, Fayetteville, AR 72701, or may be purchased at the University Book Store in the Arkansas Union.

Students who enter a college within the University of Arkansas in the academic year of this catalog generally may expect to follow the graduation requirements set forth by that college in this catalog. Because the faculty of each college reserves the right to change graduation requirements, students should meet with their college advisers regularly to be certain that they are aware of any changes in graduation requirements that may apply to them.

Acceptance of registration by the University of Arkansas and admission to any educational program of the University does not constitute a contract or warranty that the University will continue indefinitely to offer the program in which a student is enrolled. The University expressly reserves the right to change, phase out, or discontinue any program.

The listing of courses contained in any University bulletin, catalog, or schedule is by way of announcement only and shall not be regarded as an offer of contract. The University expressly reserves the right to 1) add or delete courses or programs from its offerings, 2) change times or locations of courses or programs, 3) change academic calendars without notice, 4) cancel any course for insufficient registrations, or 5) revise or change rules, charges, fees, schedules, courses, requirements for degrees and any other policy or regulation affecting students, including, but not limited to, evaluation standards, whenever the same is considered to be in the best interests of the University of Arkansas.
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## 2006 Academic Calendar

### SUMMER SESSION I 2006 (29 CLASS DAYS)
- **April 10-May 23**: Open Registration
- **May 22**: Classes begin
- **May 23**: Last day to register, add a course, or change from audit to credit
- **May 25**: Last day to drop without a mark of “W” or change from credit to audit
- **May 29**: Memorial Day Holiday
- **June 19**: Last day to drop a Session I class
- **June 30**: Last day to officially withdraw from Session I
- **June 30**: Last day of classes for Session I

### SUMMER SESSION II 2006 (29 CLASS DAYS)
- **April 10-July 5**: Open Registration
- **July 3**: Classes begin
- **July 4**: Independence Day Holiday
- **July 5**: Last day to register, add a course, or change from audit to credit
- **July 7**: Last day to drop without a mark of “W” or change from credit to audit
- **July 31**: Last day to drop a Session II class
- **August 11**: Last day to officially withdraw from Session II
- **August 11**: Last day of classes for Session II

### SUMMER SESSION III 2006 (58 CLASS DAYS)
- **April 10-May 25**: Open Registration
- **May 22**: Classes begin
- **May 25**: Last day to register, add a course, or change from audit to credit
- **May 29**: Memorial Day Holiday
- **June 1**: Last day to drop without a mark of “W” or change from credit to audit
- **July 4**: Independence Day Holiday
- **July 18**: Last day to drop a Session III class
- **August 11**: Last day to officially withdraw from Session III
- **August 11**: Last day of classes for Session III

### SUMMER SESSION IV 2006 (49 CLASS DAYS)
- **April 10-June 7**: Open Registration
- **June 5**: Classes begin
- **June 7**: Last day to register, add a course, or change from audit to credit
- **June 13**: Last day to drop without a mark of “W” or change from credit to audit
- **July 4**: Independence Day Holiday
- **July 20**: Last day to drop a Session IV class
- **August 11**: Last day to officially withdraw from Session IV
- **August 11**: Last day of classes for Session IV

### SUMMER SESSION V 2006 (24 CLASS DAYS)
- **April 10-June 6**: Open Registration
- **June 5**: Classes begin
- **June 6**: Last day to register, add a course, or change from audit to credit
- **June 7**: Last day to drop without a mark of “W” or change from credit to audit
- **June 27**: Last day to drop a Session V class
- **July 4**: Independence Day Holiday
- **July 17**: Last day to officially withdraw from Session V
- **July 7**: Last day of classes for Session V

### SUMMER SESSION VI 2006 (25 CLASS DAYS)
- **April 10-July 11**: Open Registration
- **July 10**: Classes begin
- **July 11**: Last day to register, add a course, or change from audit to credit
- **July 12**: Last day to drop without a mark of “W” or change from credit to audit
- **August 1**: Last day to drop a Session VI class
- **August 11**: Last day to officially withdraw from Session VI
- **August 11**: Last day of classes for Session VI

### FALL 2006 (73 CLASS DAYS; 43 MWF, 30 TT)
- **April 10-Aug 25**: Open Registration for currently enrolled students
- **August 16-25**: Open Registration for all students
- **August 21**: Classes begin
- **August 25**: Last day to register, add a course, or change from audit to credit
- **September 1**: Last day to drop without a mark of “W” or change from credit to audit
- **September 4**: Labor Day Holiday
- **October 27**: Last day to drop a fall semester class
- **November, Early Priority Registration for Spring 2007 - dates not available at publication time**
- **November 22**: Fall Break (administrative offices will be open.)
- **November 23-24**: Thanksgiving Holiday
- **December 5**: Last day to officially withdraw from all classes
- **December 5**: Last day of classes for fall semester
- **December 6**: Dead Day
- **December 7-13**: Final exams

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The University’s official five-year academic calendar is located on the World Wide Web at [http://www.uark.edu/classes/CalCover.html](http://www.uark.edu/classes/CalCover.html).
2007 Academic Calendar

Spring 2007 (73 CLASS DAYS; 43 MWF, 30 TT)
January 10-22  Open Registration
January 15  Martin Luther King Day
January 16  Classes begin
January 22  Last day to register, add a course, or change from audit to credit
January 29  Last day to drop without a mark of “W” or change from credit to audit
March 19-23  Spring Break Week
March 30  Last day to drop a spring semester class
March 30-31  Last day to officially withdraw from all classes
May 3  Last day of classes for spring semester
May 4  Dead Day
May 5-11  Final exams
May 12  All University Commencement
May 19  Law School Commencement

Summer Session I 2007 (29 CLASS DAYS)
May 21  Classes begin
May 28  Memorial Day Holiday
June 29  Last day of classes for Session I

Summer Session II 2007 (29 CLASS DAYS)
July 2  Classes begin
July 4  Independence Day Holiday
August 10  Last day of classes for Session II

Summer Session III 2007 (58 CLASS DAYS)
May 21  Classes begin
May 28  Memorial Day Holiday
July 4  Independence Day Holiday
August 10  Last day of classes for Session III

Summer Session IV 2007 (49 CLASS DAYS)
June 4  Classes begin
July 4  Independence Day Holiday
August 10  Last day of classes for Session IV

Summer Session V 2007 (24 CLASS DAYS)
June 4  Classes begin
July 4  Independence Day Holiday
July 6  Last day of classes for Session V

Summer Session VI 2007 (25 CLASS DAYS)
July 9  Classes begin
August 10  Last day of classes for Session VI

Fall 2007 (73 CLASS DAYS; 43 MWF, 30 TT)
August 20  Classes begin
September 3  Labor Day Holiday
November 21  Fall Break (administrative offices will be open)
November 22-23  Thanksgiving Holiday
December 4  Last Day of Classes
December 5  Dead Day
December 6-12  Final Exams

University of Arkansas, Fayetteville
Administrative Officers

SYSTEM ADMINISTRATION

President, University of Arkansas  B. Alan Sugg, B.S.B.A., M.Ed., Ph.D.

CHANCELLOR AND VICE CHANCELLORS

Chancellor, University of Arkansas, Fayetteville  John A. White, B.S.I.E., M.S.I.E., Ph.D.
Provost and Vice Chancellor for Academic Affairs  Robert V. Smith, B.S., M.S., Ph.D.
Vice Chancellor for Finance and Administration  Donald O. Pederson, B.S., Ph.D.
Vice Chancellor for Government and Community Relations  Richard Hudson, B.A., M.A.
Vice Chancellor for Student Affairs  Johnetta Cross Brazzell, B.A., M.A., Ph.D.
Vice Chancellor for University Advancement  G. David Gearhart, B.A., J.D., Ed.D.

DEANS

Honors College  Bob McMath, B.A., M.A., Ph.D.
Dale Bumpers College of Agricultural, Food and Life Sciences  Gregory J. Weidemann, B.S., Ph.D.
School of Architecture  Graham F. Shannon, B.A., B.Arch., M.Arch.
J. William Fulbright College of Arts and Sciences  Donald R. Bobbitt, B.S., Ph.D.
Sam M. Walton College of Business  Dan L. Worrell, B.S., M.S., Ph.D.
Division of Continuing Education  Donnie Dutton, B.S., M.E., Ph.D.
College of Education and Health Professions  M. Reed Greenwood, B.S.E., M.Ed., Ed.D.
College of Engineering  Ashok Saxena, B.Tech., M.S., Ph.D.
School of Law  Howard Brill, A.B., J.D., LL.M. (Interim)
Graduate School  Collis R. Geren, B.S., M.S., Ph.D.
University Libraries  Carolyn Henderson Allen, B.S., M.S.
A Message from the Chancellor

As you move into and through your college career, I invite you to join the University of Arkansas community and to share in our vision for the University of Arkansas to emerge as a nationally competitive, student-centered research university serving Arkansas and the world. With help from our innovative and devoted faculty and bright, hard-working students like you, the University of Arkansas moves closer to realizing this vision with each passing year. Ever-mindful of the vision, we strive to make progress toward five institutional goals:

- Strengthening academic quality and reputation by enhancing and developing programs of excellence in teaching, research, and outreach;
- Increasing the size and quality of our student body;
- Enhancing diversity among our faculty, students, and staff;
- Increasing public financial support, particularly that provided by the state and federal government;
- Increasing private gift support from alumni, friends, corporations, foundations, and other organizations.

The University of Arkansas is building on a proud, 134-year history, one that has produced more than 125,000 graduates. And while the University already is well-known for its teaching, research, and outreach, the future promises to bring even greater renown to the University of Arkansas. In 2002, the Walton Family Charitable Support Foundation gave the largest gift ever to an American public research university—$300 million to the University of Arkansas. From that gift, $100 million endowed the University of Arkansas graduate school. The remaining $200 million established and endowed the University of Arkansas Honors College.

The effects are already in evidence. The graduate school is attracting talented graduate scholars in record numbers. The Honors College also is prospering, with nearly 1,800 students currently enrolled and taking advantage of a rigorous academic program at the University, which will prepare them for a future of leadership, service, and success in their communities and professions. They and many other students are taking advantage of study abroad opportunities, pursuing research projects, or benefiting from the many scholarships and fellowships available to undergraduates at the U of A. Whether in the Honors College or in any of the fine departments and programs interspersed throughout the University, all students are encouraged to strive for their highest level of achievement.

I invite you to use this catalog of the University of Arkansas and become better acquainted with who we are and where we’re going. On behalf of the University community, I wish you all the best, and I hope this catalog encourages you to take advantage of the lifetime of opportunities waiting for you at the University of Arkansas.

Sincerely,

John A. White
Chancellor
University Profile

VISION

The University of Arkansas is a nationally competitive, student-centered research university serving Arkansas and the world.

HISTORY

Founded as a land-grant college and state university in 1871, the University of Arkansas opened its doors to students on January 22, 1872. Under the Morrill Land-Grant College Act of 1862, federal land sales provided funds for the new university, which was charged with teaching “agricultural and the mechanic arts,” “scientific and classical studies,” and “military tactics” to Arkansans.

Statewide elections, held to establish voting bonds to help finance the University, eventually determined the school’s location. Washington County and the City of Fayetteville submitted the highest bid, a total of $130,000, to which was added a $50,000 state appropriation for the benefit of the institution and $135,000 from the sale of federal lands. With $12,000 of this money, the University purchased a 160-acre farm, the homestead of William McIlroy, and established its campus on a hilltop overlooking the Ozark Mountains.

There were few facilities and little money that first academic year, but the eight students and three faculty members who gathered for classes in 1872 showed the same dedication to learning and commitment to excellence that has carried the University of Arkansas into the 21st century. Over the past 135 years, the University has developed into a mature institution with nine schools and colleges, more than 800 faculty members, and 17,821 students. It serves as the major provider of graduate-level instruction in Arkansas. The research and scholarly endeavors of its faculty make it an economic and cultural engine for the state. And its public service activities reach every county in Arkansas, throughout the nation, and around the world.

MISSION

As a land-grant university, the University of Arkansas strives to fulfill a three-fold mission of teaching, research, and service. In addition, as the flagship campus of the University of Arkansas System, the U of A in Fayetteville serves as the state’s major center of liberal and professional education and as Arkansas’ main source of theoretical and applied research.

Students pursue a broad spectrum of academic programs leading to baccalaureate, master’s, doctoral, and professional degrees, not only in traditional disciplines within arts, humanities, social sciences, and natural sciences, but also in the core professional areas of agricultural, food and life sciences; architecture; business; education; engineering; nursing; human environmental sciences; and law.

The University of Arkansas houses more than 200 academic programs and offers 83 bachelor’s degrees in 74 fields of study. Students may also pursue a wide range of graduate degrees, including the Master’s, the Educational Specialist, the Doctor of Education, and the Doctor of Philosophy. Information about graduate programs can be found in the Graduate School Catalog or on the World Wide Web at http://www.uark.edu/depts/gradinfo/.

The Carnegie Foundation categorizes the University of Arkansas as a research institution with “high research activity,” placing the U of A in the top 10 percent of universities nationwide and in a class by itself within the state of Arkansas. In its 2005 edition, U.S. News and World Report ranked the University in the top tier of institutions of higher education. Faculty members perform cutting-edge research for which they annually win prestigious grants and awards, and the University encourages undergraduates to participate in the research process. Such opportunities enhance the learning process by providing hands-on experience in lab and research techniques, by developing students’ abilities to implement, experiment, discover and teach, and by fostering a mentoring relationship early in students’ academic careers.

Research programs involving both faculty and students serve as vital sources of information on the economic and social needs of Arkansas. In many fields, research performed at the University of Arkansas reaches beyond the state to provide insight and guidance on issues of national and international concern. The University provides extensive technical and professional services to varied groups and individuals throughout the state, helping to further Arkansas’ economic growth. The University operates nationally respected high school and college-level correspondence programs; it assists other institutions in developing educational programs; it offers graduate programs, both cooperatively and singly, throughout the state; and it makes specialized campus resources such as computing services and library holdings available to other institutions in the state.

LOCATION

A thriving city in the northwest corner of the state, Fayetteville is home to the 345 acres and 130 buildings that comprise the University of Arkansas campus. In the heart of the Ozark Mountains, the city boasts a lively cultural scene and easy access to outdoor recreation. In 2003, Outside magazine named Fayetteville 23rd out of the top 40 college towns in America. With a population of 60,000, Fayetteville was heralded as one of Business Week’s 2002 “Dazzling Dozen” small cities in the U.S. Northwest Arkansas is the sixth-fastest-growing region in the nation, according to the U.S. Census, and was recently included among the top four “Best Places for Work” by CNN/Money. The Milken Institute rates the metropolitan economy as the eighth strongest in the country. Fayetteville’s temperate climate ensures beautiful seasons year-long, and it is central to larger metropolitan areas, including Dallas, Kansas City, Little Rock, Memphis, St. Louis, and Tulsa.
The academic units of the University of Arkansas, Fayetteville, include nine colleges and schools and two military departments: the Dale Bumpers College of Agricultural, Food and Life Sciences, which includes the School of Human Environmental Sciences; the School of Architecture; the J. William Fulbright College of Arts and Sciences, which includes the School of Social Work; the Sam M. Walton College of Business; the College of Education and Health Professions, which includes the Eleanor Mann School of Nursing; the College of Engineering; the School of Law; the Graduate School; the Honors College; and the Departments of Army and Air Force ROTC. In addition, the Division of Continuing Education offers non-credit course work, correspondence courses for credit, and off-campus credit courses in cooperation with colleges and schools at Fayetteville.

The School of Law and the Graduate School offer professional and graduate degrees.

**FIELDS OF STUDY BY COLLEGE AND SCHOOL**

Following is a list of fields of undergraduate study offered at the University of Arkansas, Fayetteville.

**Dale Bumpers College of Agricultural, Food and Life Sciences**
- Agricultural Economic and Agribusiness
- Agricultural Education, Communication and Technology
- Animal Science
- Biological Engineering
  (joint program with the College of Engineering)
- Crop Management
- Environmental, Soil, and Water Science
- Food Science
- Horticulture
- Poultry Science
- Turf and Landscape Horticulture

**School of Human Environmental Sciences**
- Apparel Studies
- Foods, Human Nutrition, and Hospitality
- General Human Environmental Sciences
- Human Development, Family Sciences, and Rural Sociology
- Interior Design

**School of Architecture**
- Architecture
- Architectural Studies
- Landscape Architecture
- Landscape Architectural Studies

**J. William Fulbright College of Arts and Sciences**
- American Studies
- Anthropology
- Art
- Biology
- Chemistry
- Classical Studies
- Communication
- Computer Science (B.A.)
- Criminal Justice
- Drama
- Earth Science
- Economics
- English
- French
- Geography
- Geology
- German
- History
- International Relations
- Journalism
- Mathematics
- Medical Sciences
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Public Administration (B.S.)

**School of Social Work**
- Sociology
- Spanish

**Second (or dependent) Majors**
- African American Studies
- European Studies
- Latin American Studies
- Middle East Studies
- Russian Studies

* A second (or dependent) major must be earned in a degree program in which the first major is one authorized to be given independently.
Sam M. Walton College of Business
Accounting
Business Economics
Finance
General Business
Information Systems
International Business
Management
Marketing
Transportation and Logistics

College of Education and Health Professions
Communication Disorders
Elementary Education
Health Science
Kinesiology
Middle-Level Education
Recreation
Vocational Education
Eleanor Mann School of Nursing

College of Engineering
Biological Engineering
Chemical Engineering
Civil Engineering
Computer Engineering
Computer Science (B.S.)
Electrical Engineering
Industrial Engineering
Mechanical Engineering

Undeclared Major
Certain degree-seeking students who are temporarily undecided about their choice of a major field of study may select the undeclared major. However, all undergraduate students still must enroll in one of the colleges or schools. Each of these academic units makes provisions for undeclared majors and each has its own rules for the point at which a student must declare a major.

PRE-PROFESSIONAL PROGRAMS

Pre-Law
The University of Arkansas School of Law does not prescribe a specific pre-law curriculum and does not require any single “pre-law major.” Instead, prospective students are encouraged to select baccalaureate majors best suited to individual interests and abilities. However, writing courses are often very valuable.

A baccalaureate degree is required for admission to the University of Arkansas School of Law, except for those students in the Dale Bumpers College of Agricultural, Food and Life Sciences or the J. William Fulbright College of Arts and Sciences who are admitted to the special six-year program. All applicants for admission are required to take the Law School Admission Test.

Other Pre-Professional Programs
Fulbright College offers pre-professional programs and advisers in law, medicine, dentistry, optometry, medical technology, chiropractic, physical therapy, pharmacy, dental hygiene, occupational therapy, social work, and theology. The Dale Bumpers College of Agricultural, Food and Life Sciences coordinates the pre-veterinary medicine program.

ACCREDTIATIONS
The University of Arkansas, Fayetteville, is accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools, 30 North LaSalle Street, Suite 2400, Chicago, Illinois, 60602-2504. Some colleges and programs are also accredited by other agencies, associations, or professional organizations, including those listed below.

Dale Bumpers College of Agricultural, Food and Life Sciences
The Bachelor of Science in Human Environmental Sciences (B.S.H.E.S.) degree programs are accredited by the Council for Professional Development of the American Association of Family and Consumer Sciences. The degree program in dietetics is accredited by the Commission on Accreditation for Dietetic Education of the American Dietetics Association. The Bachelor of Interior Design (B.I.D.) degree is accredited by the Foundation for Interior Design Education Research (FIDER). The Nursery School and the Infant Development Center in the School of Human Environmental Sciences are accredited by the National Association for the Education of Young Children (NAEYC). The Bachelor of Science in Agricultural, Food and Life Sciences (B.S.A.) in food science is accredited by the Institute of Food Technologists. Teacher education programs in agriculture and family and consumer sciences are coordinated with educational programs in the College of Education and Health Professions and are accredited by the National Council for Accreditation of Teacher Education (NCATE).

School of Architecture
The Bachelor of Architecture (B.Arch.) program is accredited by the National Architectural Accreditation Board, and the Bachelor of Landscape Architecture (B. Landscape Arch.) program is accredited by the Landscape Architectural Accreditation Board of the American Society of Landscape Architects.

J. William Fulbright College of Arts and Sciences
The Bachelor of Science (B.S.) degree program in chemistry is accredited by the American Chemical Society. The American Council on Education in Journalism and Mass Communications has accredited the Bachelor of Arts (B.A.) degree program in journalism. The degree programs in the Department of Music are accredited by the National Association of Schools of Music. The Doctor of Philosophy (Ph.D.) degree program in psychology is accredited by the American Psychological Association. The Bachelor of Arts (B.A.) degree program in social work is accredited by the Council of Social Work Education.

Sam M. Walton College of Business
The Sam M. Walton College of Business offers degree programs for undergraduate students and for graduate students at both the master’s and doctoral levels and has been a member of and accredited by AACSB International, the Association to Advance Collegiate Schools of Business, since 1931. The accounting program was separately accredited in 1986 at both the bachelor’s and master’s levels. The master’s in business administration program was approved in 1963. Accreditation by AACSB and membership in that organization signifies the college’s commitment to AACSB goals of promoting and achieving the highest standards of business education.

College of Education and Health Professions
The teacher education programs in the College of Education and Health Professions are accredited by the National Council for Accreditation of Teacher Education. The M.A.T. program in child-
hood education is in compliance with the standards of the National Association for the Education of Young Children. The M.A.T. program in middle school education is in compliance with the standards of the National Middle School Association. The various M.A.T. licensure programs in secondary education are in compliance with the standards of the specialty organizations including National Council of Teachers of English, National Council of Teachers of Mathematics, National Science Teachers Association, and National Council for the Social Studies. The Master of Science degree program in speech pathology-audiology is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association. The Bachelor of Science in Nursing (B.S.N.) degree program is accredited by the National League for Nursing Accrediting Commission (61 Broadway Street, New York, NY 10006, 212-363-5555, Ext. 153) and is approved by the Arkansas State Board of Nursing. The Bachelor of Science in Education (B.S.E.) degree program in health science, kinesiology, recreation, and dance is accredited by the Council on Accreditation of the National Recreation and Park Association. The Master of Science degree in rehabilitation counseling is accredited by the Council on Rehabilitation Education.

College of Engineering

Accreditation has been approved by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology for the following degree programs in the College of Engineering: Bachelor of Science in Biological Engineering (B.S.B.E.), Bachelor of Science in Chemical Engineering (B.S.Ch. E.), Bachelor of Science in Civil Engineering (B.S.C.E.), Bachelor of Science in Computer Engineering (B.S.Cmp.E.), Bachelor of Science in Electrical Engineering (B.S.E.E.), Bachelor of Science in Industrial Engineering (B.S.I.E.), and Bachelor of Science in Mechanical Engineering (B.S.M.E.), Master of Science in Environmental Engineering (M.S.En.E.), Master of Science in Transportation Engineering (M.S.T.E.).

School of Law

The degree programs in the School of Law on the Fayetteville campus are accredited by both the American Bar Association and the Association of American Law Schools.

SPECIAL PROGRAMS AND OPPORTUNITIES

Honors Studies

Interested students should write to the Director of Honors Program in the appropriate college.

The honors program in the Bumpers College of Agricultural, Food and Life Sciences provides students with opportunities for intellectual enrichment beyond the traditional undergraduate experience. This is accomplished through special honors courses, completion of an undergraduate honors thesis and other significant activities including interactions with students in honors programs in other colleges. The results of the student’s original research or creative project are published in Discovery, the college undergraduate research journal. In support of these efforts, participants in the Honors Program are eligible to receive an honors stipend in support of their research projects. The transcript and diploma of each honors graduate will designate the student as an honors graduate of the college. At the college commencement ceremony, each honors graduate will wear special regalia and have the title of their honors thesis and their mentors’ names listed in the graduation program. Students must maintain a grade-point average of 3.25 to remain in the program. Students who do not participate in the program may also graduate with honors designation. For additional information, see the Bumpers College section of this catalog.

The Departments of Architecture and Landscape Architecture in the School of Architecture provide opportunities for students of superior academic and creative ability to enhance and enrich their professional and liberal education by participating in the School’s honors programs. Please contact the School’s Academic Advising Center for specific requirements.

To create an intellectual environment that will challenge the best of students, the J. William Fulbright College of Arts and Sciences provides a comprehensive program of honor studies. From the first year to the senior year, an honors student is provided the opportunity to study with other superior students in small distinctive classes taught by highly motivated and skilled faculty members. There are also opportunities for independent study so that students learn to work on their own and to develop their abilities and interests in ways that are not normally possible in regular college course work. Students participating in a program of honors studies also receive special academic counseling to satisfy their future career objectives. Students are offered every opportunity to achieve a high level of intellectual maturity and accomplishment. For additional information, see the Fulbright College section of this catalog.

The honors program in the Sam M. Walton College of Business is offered to high-achieving students interested in obtaining an outstanding business education at the University of Arkansas. Students who participate in the program will take honors classes in the University core as well as honors colloquia in the Walton College offered exclusively to honors students. The subject matter of these colloquia varies from year to year and focuses on current business issues. Students in the Walton Scholars Program will be offered a capstone course in the senior year involving actual consultation with an Arkansas business. Honors students also will complete a thesis in the senior year. Students in the honors program are entitled to register on the first day of registration week, have exclusive access to an honors computer lab and study area, and will be given priority consideration in such programs as the Arkansas Cooperative Education Program. For further information, see the Walton College section of this catalog.

The honors program in the College of Education and Health Professions enables undergraduate students who have demonstrated potential for outstanding scholarship achievement an opportunity to broaden and deepen their liberal and professional education. Honors students participate in honors seminars, leadership skills development and a required undergraduate thesis/project. Students are provided opportunities to enhance their learning experience through critical thinking, leadership skills development and independent study. For additional information, see the College of Education and Health Professions section of this catalog.

The College of Engineering has established an honors program to challenge superior students with a more in-depth academic program and research experience and to provide a structure for working more closely with faculty members and other students in a team environment. An honors program is highly recommended for individuals planning academic or research-related careers that require considerable critical and original independent thinking. Students must formally apply for admission to the Engineering Honors Program. Once accepted into the program, honors students take a minimum of 12 hours of honors courses (a minimum of 6 of these 12 hours must be in engineering), participate in undergraduate research and write an undergraduate thesis, and must fulfill any additional departmental requirements. To retain status in the Honors Program, a student must maintain a minimum cumulative grade-point average of 3.25 for all course work, computed at the end of the spring semester. To receive an honors Latin designation at graduation, a student must hold a cumulative GPA of 3.50 or better for all course work, computed at graduation. Students with a GPA between 3.25 and 3.50 do not receive a Latin designation at graduation. For more information, see the College of Engineering chapter of this catalog.
Campuswide Academic Honor Societies

For other academic honor societies, see the various school and college sections of this catalog.

Golden Key is an academic honor society open to selected juniors and seniors who have a minimum grade-point average of 3.50.

Order of Omega honor society is exclusive to members of the Greek community on the University campus. Selection of members is based upon leadership in the inter-Greek activities, academic honors, and contributions to the University community. A 2.50 GPA is necessary for membership consideration.

Phi Eta Sigma is an academic honor society for freshman students. Membership is selected in the spring each year, and the only requirement is a minimum GPA of 2.75 or better for the first semester of the freshman year.

Phi Kappa Phi is a national honor society whose primary objective is the recognition and encouragement of superior scholarship in all academic disciplines. Junior and senior undergraduate students who have a minimum GPA of 3.85 are eligible for membership. Also eligible are graduate students, registered for one year, who have a minimum GPA of 3.85.

Tau Alpha Upsilon is an honor society that honors outstanding students who live in the University of Arkansas Residence Hall system.

Who's Who, a general honor society, honors students who have excelled in scholarship, leadership and campus activities throughout their college careers. Membership requirements are a minimum cumulative GPA of 2.00, completion of 85 credit hours, and at least two full semesters attendance at the University of Arkansas, Fayetteville, prior to application.

Campuswide Leadership Honor Societies

Blue Key is a service-oriented honor fraternity that recognizes outstanding scholarship, leadership and involvement in campus activities. Applicants must be classified as juniors and meet a minimum GPA of 2.75 for membership consideration.

Cardinal Key is a junior service-oriented honor society whose membership selection is based on scholarship, leadership, and community and campus activities. A 3.00 GPA requirement must be met in order to be considered for membership at the end of the sophomore year.

Cardinal XXX is a service-oriented honor society whose membership consists of a select group of sophomores. Membership selection is based on scholarship, leadership, and community and campus service. A 3.00 GPA is required for consideration, and selection is made at the end of the freshman year.

Gamma Beta Phi is a service-oriented honor society established to recognize and encourage excellence in education. Membership in the organization is open to students who are in the top 20 percent of their class.

Mortar Board is a senior honor society that considers outstanding scholarship, leadership, and service to the campus and community when selecting members. Applicants must have a 3.00 GPA in order to be eligible for consideration.

Graduate and Professional Study

The University of Arkansas is the major center for comprehensive graduate-level instruction in the state, offering students the opportunity to continue their studies or to specialize in a particular field through the Graduate School. The University offers a wide range of graduate degrees, including the master’s, the Educational Specialist, the Doctor of Education, and the Doctor of Philosophy. Non-degree graduate certificates are also offered. Information about graduate programs may be found in the Graduate School Catalog or on the World Wide Web at http://www.uark.edu/grad/.

The School of Law on the Fayetteville campus offers a juris doctor degree program for qualified students with a bachelor’s degree, and it offers the nation’s only master’s program in agricultural law for students with a law degree. Further information concerning professional study may be obtained by contacting the School of Law dean’s office for a copy of the current catalog: University of Arkansas School of Law, LeFlar Law Center, 107 Waterman Hall, Fayetteville, AR 72701, 479-575-3102. The World Wide Web address is http://law.uark.edu/.

Reserve Officer Training Corps

A true job training program, ROTC is offered at the University of Arkansas through both the U.S. Air Force and the U.S. Army. Each department provides a unique, career-oriented set of courses relevant to future leadership positions within its particular branch. In addition to studying Aerospace Education or Military Science, students interact with one another in a practical setting as they examine and apply the dynamics of leadership, management, ethics, communication, and teamwork. Participants are given the background and comprehensive building blocks to become commissioned officers in the U.S. military, if qualified. Physical activities and summer orientation programs are enhanced with continually updated curriculums. Classes are taught by military personnel, ensuring realistic perspectives on the military professions.

In the finest traditions of the University of Arkansas and the ROTC programs, students are challenged to grow, develop and assume responsibilities throughout their academic years. Underlying that teaching is a foundation of service, integrity and excellence – expected and demanded of all officer candidates. Scholarships and details of the two programs are found in the ROTC chapter of this catalog. Army ROTC is located in the Army ROTC building, 479-575-4251 or toll free 1-866-891-5538, http://www.uark.edu/army-hog/. Air Force ROTC is located in 319 Memorial Hall, 479-575-3651, http://www.uark.edu/~afrotc/.

Cooperative Education Program

Cooperative Education is a unique program offered by the Office of Career Services that allows students to alternate between going to school and working in their chosen vocation. In addition, the program allows employers the opportunity to train and evaluate future employees before offering them positions.

Employment assignments are diversified to provide students with a variety of experiences related to their major field and with work of increasing difficulty and responsibility. Although the primary objective is to supplement theoretical knowledge with practical experience, students earn full time pay while on work assignments. This benefit produces welcome income while the students are still pursuing a degree.

Positions are available to students in many disciplines, primarily engineering, architecture, landscape architecture, business, agriculture, natural science and mathematics. Co-op students must be in good academic standing, must be at least 18 years of age, must be making normal progress toward a degree, and must meet the specific requirements of their college. (For example: the College of Engineering and Dale Bumpers College of Agricultural, Food and Life Sciences require completion of the freshman year; Fulbright College of Arts and Sciences requires 45 credit hours and a 2.5 grade-point average; the Walton College of Business requires completion of pre-business program requirements; and the School of Architecture requires completion of the junior year.) In addition, employers may establish their own academic criteria for selecting students.

For further information, contact the Career Development Center, 607 Arkansas Union, 479-575-2805.
Study Abroad

The University encourages the expansion of students’ educational experiences through study abroad. Student exchange programs have been established with Kansai University and Shimane University (Japan), Hankuk University (Korea), Al-Akhawayn University (Morocco), University of Graz (Austria), University of Essex (England), University of Maine (France), and Carlos III University of Madrid (Spain). Other UA study abroad programs include summer/semester/year-long programs in Austria, England, Scotland, Costa Rica, Ireland, France, Germany, Italy, Mexico, and Spain. A limited number of scholarships and travel grants are available each year for these programs.

For more information about study, work, and travel abroad, contact the Office of Study Abroad, a division of Fulbright College, 722 W. Maple, 479-575-7582. Students in the Bumpers College of Agricultural, Food and Life Sciences may contact International Agricultural Programs, 307 Hotz Hall, 479-575-6727. Students in the Walton College of Business may contact the Undergraduate Programs Office at 479-575-4622.
Admission

UNDERGRADUATE ADMISSION

Any person who intends to register for a course at the University of Arkansas must first be admitted to the University. Students returning to the University after an absence of a fall or spring semester must also complete an application.

For students with disabilities, the University offers a variety of services to those students with physical or learning disabilities through our Center for Students with Disabilities (CSD). Students with any type of physical or learning disability are strongly encouraged to contact that office in Room 104 in the Arkansas Union, or call 479-575-3104 (TDD/Voice) to learn more about the specific nature of their services and the overall accessibility of the University.

The University reserves the right to modify admission requirements. Application forms and the most current information about admission requirements are available from the Office of Admissions. Please send all application materials and supporting documents to the following address:

Office of Admissions
232 Silas H. Hunt Hall
University of Arkansas
Fayetteville, AR 72701
Telephone: 479-575-5346 or 1-800-377-8632
http://admissions.uark.edu/

When to Apply

Students interested in applying to the University of Arkansas for the fall semester are urged to apply by the November 15 preferential deadline. Early applicants are given priority when applying for New Student Orientation and University Housing. The preferential application deadline for the spring term is November 1. To be considered for freshman scholarships, the completed admission application, scholarship information sheet, all required transcripts, test scores and application fee must be received by the Office of Admissions by February 1.

Deadlines for Admission Consideration

Applications and required transcripts must be received in the Office of Admissions by the following deadlines to be accepted for the respective enrollment periods:

Fall – August 15
Spring – December 20

Students who are unable to submit their applications by the deadline may be denied admission and considered for admission for the following term.

International students should refer to “Admission of International Students” in this chapter for application deadlines, procedures, and requirements.

How to Apply


2. Request that all required transcripts be sent to the Office of Admissions. Only official transcripts will be accepted. Transcripts are not considered official unless submitted in a sealed, stamped envelope or faxed directly from the previous institution. Questionable or unreadable transcripts may be refused.

   High school transcripts are required of all entering freshmen and transfer students with fewer than 24 transferable semester hours. A preliminary admission will be provided to high school seniors on the basis of sixth- or seventh-semester transcripts. However, a final transcript showing all high school course work and certifying actual graduation must be submitted before a student may register for a second term.

   College transcripts must be provided from each college or university attended. Only official transcripts will be accepted. Transcripts are not considered official unless submitted in a sealed, stamped envelope or faxed directly from the previous institution. Questionable or unreadable transcripts may be refused.

3. All new freshmen and transfer students with fewer than 24 transferable credit hours must submit ACT or SAT I test scores. Non-traditional students applying three or more years after high school graduation have the option of submitting the ACT ASSET to satisfy testing requirements. The University will not accept test scores taken more than five years prior to enrollment. Test scores should be sent directly to the University by the testing agency. The University’s institutional codes are: ACT-0144; SAT-6866.

4. All students born after January 1, 1957, must return the immunization form enclosed with the offer of admission. Immunization proof is required prior to first registration.

5. English Proficiency: Applicants whose native language is not English must submit a Test of English as a Foreign Language (TOEFL) score of at least 550 (paper based), 213 (computer based), 80 (internet based), or a minimum score of 6.5 on the IELTS (writing) taken within the preceding two years. Students who have completed grades 10-12 at a U.S. accredited high school and have a satisfactory ACT English sub score may request a review for waiver of this requirement. Students trans-
ferring from an accredited U.S. institution (or institution in a
country where English is the native language) with at least 24
transferable credit hours and successful completion of English
Composition I and II with a grade of “C” or above will not be
required to submit the TOEFL or IELTS for admission consid-
eration. For more information about the TOEFL, you may write
to TOEFL Services, ETS, PO Box 899, Princeton, New Jersey
08541 or visit the World Wide Web at http://www.TOEFL.org/.

6. The University shall admit only those applicants whose
enrollment will not be detrimental to the quality of life and
the educational programs of the University. The Faculty
Committee on Admissions and Transfer of Credit has authority
to interpret University admission or transfer policy and to grant
a variance. The Third Level Administrative Committee has the
final authority in admission and transfer policy. An applicant
who has withheld pertinent information regarding educational
background or who has falsified information or credentials may
be denied admission to the University or, if enrolled, may be
immediately withdrawn.

PREPARATORY CURRICULUM FOR ENTERING
FRESHMEN, ACADEMIC YEAR 2005-2006

Applications are reviewed on an individual basis with consider-
ation given to the applicant’s overall grade-point average (GPA), core
GPA, class rank, standardized test scores, and a personal essay. New
freshmen and those transfer students with fewer than 24 transferable
semester hours should have taken or be completing the following
college preparatory curriculum in high school:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 units</td>
</tr>
<tr>
<td>Social Studies</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>3 units</td>
</tr>
<tr>
<td>1 unit general sciences – 2 units lab sciences (Choose two courses from biology, chemistry, and physics laboratory. Two years of principles of technology will meet one unit of natural sciences [physics]. Two years of applied biology/chemistry will meet one unit of natural sciences [biology].)</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>4 units</td>
</tr>
<tr>
<td>(Units must be equivalent or of a higher level than Algebra I)</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>2 units</td>
</tr>
<tr>
<td>(To be chosen from English, foreign languages, oral communication, mathematics, computer science, natural sciences, and social studies.) As you choose your electives, residents of Arkansas please remember that to be eligible for Arkansas Department of Higher Education scholarships (i.e. Governor’s or Challenge) students must also have 2 years of the same foreign language.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16 units</td>
</tr>
</tbody>
</table>

Students who have taken these course requirements and who have
a high school overall GPA of at least 3.00 and an ACT of 20 (or
SAT of 930) or better will be admitted automatically. Those who do
not may be admitted on the basis of individual review of their appli-
cation materials. The admission decision will be based on evidence
of ability to graduate from the University of Arkansas. Students who
are eligible to graduate early and have met all of the requirements
will be automatically admitted.

Accelerated Admission

Superior high school students who have completed a rigorous
college preparatory curriculum may seek admission to the freshman
class at the end of their junior year of high school. Applicants for
accelerated admission are required to complete certain required
subjects during three years of high school study, to submit letters
of recommendation, and to submit an ACT or SAT score equivalent
to at least the 90th percentile of the University’s previous entering
class. Additional information and application materials may be
obtained by visiting or calling the Office of Admissions.

ADMISSION OF TRANSFER STUDENTS

Transfer Admission Requirements

Applicants who have attended other colleges or universities after
high school graduation are considered transfer students. The appli-
cant must submit official transcripts of all previous college courses
attempted whether or not credit was earned and regardless of whether
the applicant wishes to transfer any credit. This transcript must be
sent directly to the Office of Admissions from each institution attend-
ed or be submitted in an official, sealed, school envelope or faxed
from the institution’s registrar’s office with an official cover sheet.
All transfer students must meet the following requirements:
1. Have a cumulative grade-point average of at least 2.00 on all
course work attempted, and
2. Be eligible to return to the last institution attended. Grade-point
   average is calculated on all course work attempted.

Students who have completed fewer than 24 transferable semester
hours must, in addition to the above requirements, meet all
requirements for freshman admission (see Admission of Entering
Freshmen). Test scores and transcripts are also evaluated to deter-
mine whether State of Arkansas requirements for developmental
course placement have been met. (See page 27.) For policies regard-
ing transfer of credit from other institutions, see page 44.

Provisional Admission

If a student is currently enrolled at another institution at the time the
admission decision is made, a provisional admission may be granted
during the semester immediately prior to the student’s registration at
the University, provided the following requirements are satisfied:
1. at the time of application, the student must
   a. present the most recent official transcripts (if any)
      from every college attended, and
   b. have an overall grade-point average of at least 2.00
      on all college course work attempted.
2. Transfer students entering in terms immediately following
   enrollment at another institution may, in special cases, make
   arrangements to register if a final transcript is not yet available
   from the previous institution. All other official documentation
   must be on file. In those cases, final official transcripts show-
ing an overall grade-point average of at least 2.00 on all college
   course work attempted will be required within a specified time
   and prior to registering for a second term or semester at the
   University. Failure to demonstrate the required 2.00 average
   may result in an immediate administrative withdrawal.

International students should refer to the section on “Admission of
International Students” in this chapter for requirements.

Arkansas Assessment of General Education (AAGE)
or Rising Junior Exam

All undergraduates in Arkansas public institutions who have
earned at least 45 hours of credit toward a degree are required to take
the Arkansas Assessment of General Education Exam (AAGE), also
known as the Rising Junior Exam.

Students transferring from other Arkansas institutions who have
earned 45 or more transferable semester hours must take the AAGE
exam during the first semester of enrollment, unless the student has
documentation that it was completed at another college or university
in Arkansas. The only students who are exempt from the AAGE
Students who do not meet the AAGE requirement by the last day of their first semester will lose their future registration privileges.

Testing services, 713 Hotz Hall, mails exam registration packets to a student’s local address. For more information on the AAGE, contact testing services at 479-575-3948.

(See also “Advanced Composition” on page 41.)

**ADMISION OF SPECIAL (NON-DEGREE SEEKING) STUDENTS**

Applicants who are not interested in working toward a degree while taking classes may, under certain conditions, be approved to do so upon submitting an application for admission. Degree-seeking students attending part-time or as an “undeclared major” should not confuse their status with this special, non-degree seeking category. The Office of Admissions reserves the right to determine the proper category of admission and to determine what credentials may be required.

Classification as a special student permits enrollment in credit classes (or as an auditor) on a space-available basis; however, special students are not eligible for financial aid, and the University incurs no particular obligation to provide academic advisement.

Admission as a non-degree student is not intended to serve as a means of access to regular, degree-seeking status nor is it intended for a person who has earned unsatisfactory grades in previous high school or college course work. Students who have been denied regular undergraduate admission are not eligible for this status. Special students are subject to the same regulations concerning scholastic probation, suspension, and dismissal as other undergraduate students. Students who have previously been assessed developmental course requirements, high school course deficiencies, or a conditional admission will retain that status as a special student.

Special students must meet course prerequisites and should be prepared to verify to the department by official documentation that University course prerequisites have been met, if appropriate. Students planning to enroll in any upper-division education courses that University course prerequisites have been met, if appropriate.

Except for students participating in the senior citizens’ enrollment. For further information consult the online schedule of classes www.uark.edu/registrar/classes/soc.html.

**Deadline for Admission Consideration**

Applications and required transcripts must be received in the Office of Admissions by the following deadlines to be accepted for the respective enrollment periods:

**Fall – August 15**

**Spring – December 20**

Students who are unable to submit their applications by the deadline may be denied admission and considered for admission for the following term.

**Requirements**

1. Students must be academically eligible to return to the University and are readmitted with the same academic status as held during their last attendance. Course work taken at another institution will not affect a student’s probationary status or UA
Admission

A student transferring with fewer than 24 semester hours of post-secondary work at either U.S. or foreign institutions must have the equivalent of a cumulative grade-point average of at least 2.50 on all post-secondary course work attempted. In addition to these requirements, all electrical engineering and computer systems engineering applicants must submit a Test of Spoken English (TSE) score of at least 5.0, or a 7.0 on the spoken section of the IELTS, and an ACT score of 25 (or SAT score of 1140(R)) or above, to be eligible for admission. A non-refundable application fee of $50 is required for all international applicants. All applications and supporting documents must be submitted by May 31 for the fall semester; October 31 for the spring semester; and March 1 for the summer sessions.

Any international student returning to the University after an absence of a full semester (fall or spring) or more must submit an application for admission. For these students, the application deadlines are August 15 for the fall term and January 1 for the spring term. It should be noted that a student previously enrolled at the University of Arkansas who takes a full term of courses elsewhere and then seeks readmission to the University returns as a transfer student and must meet University admission requirements for international transfer students, submit a photocopy of the I-20 issued by the transferring institution, and submit a new financial statement. An application fee is not required for returning students.

For specific admission requirements and application materials pertaining to students on F-1 or J-1 visas, applicants should write directly to the International Admission Office, 747 W. Dickson Street, Suite 8, University of Arkansas, Fayetteville, Arkansas 72701, or call 479-575-6246 or e-mail iao@uark.edu.

Please see the section “Placement and Proficiency Tests” on page 19 for University policy regarding English language use by non-native speakers.

ACADEMIC BANKRUPTCY

Students returning to the University after an absence of five or more years may be eligible to declare academic bankruptcy if they meet the following criteria:

1. Must have been enrolled previously at the University of Arkansas, Fayetteville, as an undergraduate student and be returning as an undergraduate student.
2. Must not have been enrolled at the University during the previous five years.
3. Students who have attended another institution since their last attendance at the University must meet requirements for transfer students (2.00 GPA on all course work attempted more than five years after last enrollment at the University of Arkansas, Fayetteville) to be eligible for readmission.
4. Must submit an application for readmission and official transcripts of all college work attempted since last attendance at the University of Arkansas by the application deadlines and submit a “Declaration of Academic Bankruptcy” form (available from the Office of Admissions or academic dean’s office). The following are the conditions of academic bankruptcy:
   a. Students will forfeit all credit hours previously awarded by the University of Arkansas, Fayetteville. This includes course work completed at the University (regardless of grades earned), courses accepted in transfer, credit by examination, and any correspondence course work awarded.
   b. A new calculation of grade-point average and credit hours will begin when the student returns to the University.
   c. The transcript will reflect the student’s complete record (including all previous college work) with an added notation of “Academic Bankruptcy Declared.”
   d. Courses taken at another institution within five years of
the last UA enrollment will not be accepted in transfer. Course work completed more than five years after last UA enrollment may be accepted in transfer, subject to UA transfer credit policies. For purposes of this policy, UA correspondence course work will be treated in the same manner as transfer work.

e. For the University to provide appropriate advising and (as required by Arkansas Act 1052) appropriate assessment, a student may be required to submit ACT scores prior to registration for classes if, as a result of academic bankruptcy, that student is returning to the University as a freshman with fewer than 24 transfer hours.

PLACEMENT AND PROFICIENCY TESTS

ACT Assessment, SAT I, ACT ASSET and ACT COMPASS scores are used to determine placement in University courses. Students whose scores indicate the need for additional preparation may be placed in courses designed to prepare them for college-level work. (See Arkansas Requirements for Developmental Course Placement on page 27.) Credit earned in such courses does not count toward degrees in all colleges. (See Courses That Do Not Count toward Degrees, page 27.)

Freshman Composition Placement

• Students with ACT English scores lower than 20, or SAT I verbal scores lower than 480, ACT ASSET writing skills scores lower than 45 or ACT COMPASS writing skills lower than 75 should enroll in the course sequence ENGL 0003, ENGL 1013, and ENGL 1023.
• Students with ACT English scores of 20-27, SAT I verbal scores of 480-620, ACT ASSET writing skills scores of 45 or higher or ACT COMPASS writing skills of 75 or higher should enroll in ENGL 1013 and ENGL 1023.
• Students with ACT English scores of 28-29 or SAT I verbal scores of 630-670 may enroll in ENGL 1013 and ENGL 1023 or in Honors English (ENGL 1013H and ENGL 1023H).
• Students with ACT English scores greater than 29 or SAT I verbal scores greater than 680 may enroll in Honors English (ENGL 1013H and ENGL 1023H) or elect exemption. Students who elect exemption must complete the appropriate forms available in the English departmental office. Some degree programs require credit in composition, and students should confer with their advisers before exempting.

The Math Placement Test

This test is offered during New Student Orientation and is required of new freshmen who have not presented ACT, SAT I, ASSET or COMPASS mathematics scores and of transfer students who have not taken and passed a college-level Calculus I course. Students may opt to take the placement test to improve their placement in mathematics.

Speech Communication Exemption Examination

Students who have had speech in high school and/or experience in public speaking may elect to take this test for exemption from or credit in COMM 1313. Both the written and oral (a five-minute impromptu speech) examinations must be passed to receive exemption or credit.

Foreign Language Placement Examinations

Students with previous foreign language experience in French, German, or Spanish are encouraged to take language placement examinations offered during summer orientation. Those test scores will be used by academic advisers to determine an appropriate foreign language placement level. Students who omit one or more courses in the basic language sequence will receive credit for omitted courses when they have validated their high placement by passing the course into which they were placed with a “C” or better. Conversation courses (3033, 4033) and correspondence courses may not be used to validate such prior knowledge; and no degree credit (graduation credit) is awarded for a foreign language 1003 course to students in the J. William Fulbright College of Arts and Sciences who are continuing the language begun in high school, either by validation or regular registration.

General Chemistry Placement Examinations

These tests will be offered during orientation and at other times during the year. Students who performed at above average levels in high school chemistry may find it to their advantage to enroll directly in the second semester of general chemistry. This examination is designed to provide guidance in making this course selection. Students who place into the second semester of general chemistry and earn a grade of “C” or better in the course will also receive credit for the first semester of the course.

English Language Use by Non-Native Speakers:

Non-native speakers of English admitted to undergraduate study at the University of Arkansas are required to present an acceptable score on one of the following tests: TOEFL (TWE), IELTS (writing), or ELPT (writing). Depending upon exam scores, a student may be required to take one or more EASL courses prior to the beginning of classes in their first term of study. Non-native speakers in the following categories are exempt from this requirement:

1. Undergraduate students who transfer at least 24 hours of credit from U.S. institutions, including courses that meet the freshman composition requirement;
2. Undergraduate students who have completed grades 10 through 12 in and graduated from a U.S. high school and have obtained an ACT English section score of 19 or above or a SAT I verbal score of 460.
3. Graduate students who earned bachelors or master’s degrees from U.S. institutions or from foreign institutions where the official and native language is English;
4. Graduate or undergraduate students with a Test of Written English (TWE) score of 5.0 or IELTS writing score of 6.5.
5. Graduate students with a GRE Analytical Writing score of 4.5 or GMAT Analytical Score of 4.5.

Diagnostic and placement testing is designed to test students’ ability to use English effectively in an academic setting, and its purpose is to promote the success of non-native speakers in completing their chosen course of study at the University of Arkansas. Test results provide the basis for placement into English as a Second Language (EASL) support courses or course sequences. Courses are offered by the Department of Foreign Languages for those students whose language skills are diagnosed as insufficient for college-level work at the level to which they have been admitted (undergraduate or graduate study). Credit in EASL courses do not count toward University of Arkansas degrees. Non-native speakers diagnosed as having language competence sufficient for their level of study will not be required to enroll in EASL courses.

The ELPT is administered by Testing Services during New Student Orientation and there is a $10.00 charge.

Undergraduate and graduate students assessed EASL courses are required to complete these courses during their first semester of enrollment at the University.
GRADUATE SCHOOL ADMISSION

Applications for admission to the University of Arkansas Graduate School and two official copies of transcripts of the applicant’s academic record at each college and university attended since high school graduation must be submitted to the graduate school admissions office and approved in advance of registration. The transcripts will become a part of the student’s permanent file at the University. Applications may be obtained by writing to the Graduate and International Admissions Office, 747 W. Dickson Street, Suite 8, University of Arkansas, Fayetteville, AR 72701, or by calling 479-575-4401 or by applying on the World Wide Web at http://www.uark.edu.

Additional information and procedures for making application to the Graduate School are included in the Graduate School Catalog.

Admission to Graduate Standing

To be admitted to graduate standing, a student must have earned a baccalaureate degree from a regionally accredited U.S. institution or from an institution with substantially equivalent requirements for a baccalaureate degree and must have a grade-point average of 3.0 or better on the last 60.0 credit hours of attempted coursework prior to receiving the baccalaureate degree.

Admission to graduate standing does not admit a student to a specific program of study leading to a graduate degree. Therefore, in addition to satisfying the general requirements of the Graduate School, the applicant must also comply with the specific requirements and have the approval of the department in which graduate study is desired.

Under certain conditions, applicants for admission to the Graduate School may be required to present satisfactory scores on the graduate record examinations (GRE) or another specified national standard test.

For further details see the Graduate School Catalog.

SCHOOL OF LAW ADMISSION

A baccalaureate degree is required for admission to the University of Arkansas School of Law, except for those students in the J. William Fulbright College of Arts and Sciences or in the Dale Bumpers College of Agricultural, Food and Life Sciences who are admitted to the special six-year program. All applicants for admission are required to take the law school admission test. (See page 114 for the Fulbright College Pre-Law Program or page 74 for the Dale Bumpers College of Agricultural, Food and Life Sciences).

For complete details concerning admission to the University of Arkansas School of Law, see the School of Law Catalog or write to Office of Admissions, Leflar Law Center, University of Arkansas, Fayetteville, AR 72701, telephone 479-575-3102. Applications can be submitted on the World Wide Web at http://apply.uark.edu/.
Financial Aid and Scholarships

FINANCIAL AID

The University of Arkansas annually awards over $100 million of financial aid and scholarships to students. Financial aid is divided into categories of grants, work, loans, and scholarships. Unless otherwise specified, a student needs to complete only two forms to apply for all four basic types of assistance: The Free Application for Federal Student Aid (FAFSA), which analyzes the ability of the student’s family to pay for college; and the University’s Application for Admission. These forms collect information used by the Office of Financial Aid and the University’s scholarship committees in determining awards. In some cases, copies of the parents’ and/or student’s tax returns are needed.

DETERMINING FINANCIAL NEED

To determine financial need, a student must complete the FAFSA. Students release their information to the University of Arkansas by completing the college release section with the University of Arkansas Title IV Code of 001108.

There is a priority date of MARCH 1 for the submission of the FAFSA for the approaching school year for new students. Federally funded financial aid will be awarded on the basis of need as reflected by the FAFSA.

The Student Aid Report from the FAFSA (consisting of several pages) will be sent directly to the student by the Central Processing Service. A student needs to be enrolled or accepted for enrollment before a financial aid award may be generated. To continue receiving financial aid, the student needs to be making satisfactory progress toward a degree, as defined by the University of Arkansas. (See Satisfactory Academic Progress.)

APPLICATION PROCEDURE

1. Apply for admission to the University, if not currently enrolled or admitted.
2. Complete the Free Application for Federal Student Aid (FAFSA) and submit it to the federal processor by mail or online. You may submit the FAFSA on the Web at http://www.fafsa.ed.gov/.

Students hoping to be considered for scholarships need to have their application for admission submitted by February 15 to the University for priority consideration. However, please check with your department for earlier deadlines and additional forms.

To receive priority consideration for financial aid, all forms and applications need to be submitted by March 1. Students are encouraged to apply even if they miss this priority date. Funds will be available after the priority date.

A student has a couple of choices concerning processing his or her FAFSA. These include mailing the form to the Federal Student Aid Programs or submitting it electronically on the Web at http://www.FAFSA.ed.gov/. The processing time for electronic applications is three days, and processing time for mailed applications is four to six weeks.

SATISFACTORY ACADEMIC PROGRESS

Federal regulation requires that a student must be making satisfactory academic progress regardless of whether he or she has previously received Title IV aid. All students enrolled at the University of Arkansas who receive financial aid through the Title IV Assistance Programs must meet satisfactory academic progress requirements as defined below to be eligible for further aid. Satisfactory academic progress is deemed to have been made by any undergraduate student who meets both the quantitative and qualitative requirements indicated below.

Quantitative Requirements

There are two quantitative requirements that the student must meet to remain eligible to apply for financial assistance. First, the student must pass, at a minimum, 67 percent of the credits attempted while attending the University. Also, the student will remain eligible to apply for aid as long as the number of credits attempted is not more than 150 percent of the number of credits required for the student’s degree.

A transfer student may have earned credits at another school that will count toward his or her degree at the University of Arkansas. Only transfer credits that apply to the student’s degree will count as part of the 150 percent maximum.

The determination of each student’s meeting the quantitative requirements for satisfactory academic progress will be made annually following the conclusion of the spring semester. If a student fails to pass at least 67 percent of the credits attempted or has attempted more than 150 percent of the number of credits required for graduation, then the student must appeal for reinstatement of financial aid eligibility.

Qualitative Requirements

A student is deemed to have met the qualitative requirements for satisfactory academic progress for financial aid purposes provided the student’s academic status is not one of Academic Dismissal.

Graduate and Law Students

Satisfactory academic progress for graduate and law students is determined as described above with one exception. In order to meet the quantitative requirement, the student must pass with at least a grade of “C.” at a minimum, 67 percent of the credits attempted while attending the University at the graduate level.
SCHOLARSHIPS

The University of Arkansas, Fayetteville, awards over 5,000 scholarships totaling more than $18 million for students each year. This total does not include funds that support such external scholarships held by UA students as Governor’s Scholarships or Arkansas Academic Challenge Scholarships. Scholarships funded by the University fall into three broad categories: distinguished fellowships, academic scholarships, and special interest/skills scholarships. The scholarship information contained below applies to students entering for the 2006-2007 academic year. Current high school students interested in matriculating for the 2007-2008 academic year are encouraged to consult the Office of Academic Scholarships Web site at http://scholarships.uark.edu for the most up-to-date information.

SCHOLARSHIPS FOR NEW STUDENTS

Distinguished Fellowships

The University of Arkansas offers four distinguished Fellowships. The Sturgis Fellowship, established in 1985; the Bodenhammer Fellowship, established in 1998; the Boyer Fellowship, established in 2000; and the Honors College Fellowships, established in 2002, are among the most competitive and prestigious fellowships in the nation and are awarded to the most competitive students in the country. Each Fellow receives up to $50,000 for four years of study. Students who wish to apply should visit the Web site at http://honorscollege.uark.edu/. One application is used for all Fellowships except the Boyer Fellowship. (See the chart below for details.)

Academic Scholarships

A limited number of academic scholarships also are awarded to entering freshmen and transfer students. Selection criteria include national test scores (ACT or SAT), grade-point average, National Merit or National Achievement recognition, and quality and quantity of courses taken, and other pertinent factors. (See the chart on following page for details.) For online information, go to http://scholarships.uark.edu/.

UA SCHOLARSHIPS—GENERAL INFORMATION

The following regulations govern the general University scholarships described below:

1. FEBRUARY 1 is the scholarship deadline for entering freshmen and MARCH 15 for entering transfer students. An applicant must be admitted to the University by the above mentioned deadline to be considered for these scholarships.
2. An “entering freshman” is defined as a student who has not enrolled in another post-secondary institution in a fall or spring semester following graduation from high school.
3. Eligibility for renewal of Chancellors’ and general University scholarships is determined at the end of the second semester each academic year. Students must “catch up” in summer terms by taking classes at their own expense on the Fayetteville campus.
4. These scholarships are generally awarded per academic year to cover the fall and spring terms, up to an eight-semester maximum for most students, or a ten-semester maximum for students in architecture or pursuing a Master of Arts in Teaching. Renewal criteria are evaluated every two semesters. See http://scholarships.uark.edu/renewal.html for renewal schedules.
5. A student who is placed on academic warning forfeits his or her scholarship effective the semester of academic warning. See http://www.uark.edu/admin/regrinfo/docs/academicstanding/ASPolicy.html for a full description.

<table>
<thead>
<tr>
<th>Name</th>
<th>Annual Award</th>
<th>Eligibility Criteria</th>
<th>Application Procedure</th>
<th>Renewal Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodenhammer Fellowship</td>
<td>$12,500 per year and out-of-state differential</td>
<td>32 ACT/1420 SAT, 3.70 GPA National Merit or National Achievement finalists. Exceptional academic performance. Letters of recommendation required.</td>
<td>Requires application for admission along with the fellowship application (honorscollege.uark.edu/prospectivestudents.htm).</td>
<td>Cumulative 3.25 GPA and 30 hours earned by the end of each academic year. 4 years or 8 semesters total.</td>
</tr>
<tr>
<td>Boyer Fellowship</td>
<td>$12,500 per year</td>
<td>For majors in the Sam Walton College of Business 3.50 cumulative GPA and 30 ACT/1320 SAT or higher. Arkansas high school graduates demonstrating financial need (FAFSA must be completed prior to selection of recipients) and strong leadership. Letters of recommendation required.</td>
<td>Requires application for admission along with the Boyer Fellowship application. Go to <a href="http://waltoncollege.uark.edu/">http://waltoncollege.uark.edu/</a> for details.</td>
<td>Cumulative 3.00 GPA and 30 hours earned by the end of each academic year. 4 years or 8 semesters total.</td>
</tr>
<tr>
<td>Honors College Fellowship</td>
<td>$12,500 per year and out-of-state differential</td>
<td>ACT 32 or 1420 SAT with strong academic performance.</td>
<td>Requires application for admission along with the fellowship application (honorscollege.uark.edu/prospectivestudents.htm).</td>
<td>Cumulative 3.25 GPA and 30 hrs. earned by the end of the 2nd semester of each academic year.</td>
</tr>
<tr>
<td>Sturgis Fellowship</td>
<td>$12,500 per year and out-of-state differential</td>
<td>For majors in Fulbright College of Arts &amp; Sciences. 30 ACT/1320 SAT, 3.70 minimum GPA and exceptional academic performance.</td>
<td>Requires application for admission along with the fellowship application (honorscollege.uark.edu/prospectivestudents.htm).</td>
<td>Cumulative 3.25 GPA and 30 hours earned by the end of the second semester of each academic year. 4 years or 8 semesters total.</td>
</tr>
<tr>
<td>Name</td>
<td>Annual Award</td>
<td>Eligibility Criteria</td>
<td>Application Procedure</td>
<td>Renewal Criteria</td>
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<td>-------------------------------------</td>
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</tr>
<tr>
<td>Chancellor's Merit Scholarship</td>
<td>Up to $8,000 per year, plus the amount of either a Corporate or a UoA National Merit Scholarship, per year towards the direct cost of education, includes out-of-state tuition differential</td>
<td>National Merit or National Achievement finalists. Exceptional academic performance. Competitively Awarded</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Cumulative 3.00 GPA and 30 hours earned by the end of the second semester of each award year. 4 years or 8 semesters total (5 years or 10 semesters for students in Architecture or the M.A.T. program).</td>
</tr>
<tr>
<td>Chancellor's Scholarship</td>
<td>Up to $8,000 per year toward direct cost of education, including tuition, fees and double-occupancy room and board in UA residence hall or Greek housing (beginning with freshman 2003).</td>
<td>Applications are competitive and typically come from the top 5% of the applicant pool. National Merit Semifinalists and National Achievement Semifinalists are also considered. Competitively Awarded</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Criteria same as for Chancellor’s Merit Scholarship. (see above)</td>
</tr>
<tr>
<td>Chancellor’s Distinguished Governor’s Scholarship</td>
<td>The amount of the Arkansas Distinguished Governors Scholarship plus up to $8,000, depending on estimated cost of attendance</td>
<td>Offered if student is also awarded the Arkansas Distinguished Governor’s Scholarship by ADHE or a UoA National Merit Scholarship. Competitively awarded to Arkansas Distinguished Governor’s Scholarship recipients.</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Criteria same as for Chancellor’s Merit Scholarship. (see above)</td>
</tr>
<tr>
<td>Honors College Academy Scholarship</td>
<td>$4,000 per year</td>
<td>Considerations made for Arkansas residents from geographically under-represented areas with a minimum 28 ACT and 3.50 GPA. Competitively awarded.</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Criteria same as for Chancellor’s Merit Scholarship. (see above)</td>
</tr>
<tr>
<td>Nonresident Tuition Award</td>
<td>Out-of-state tuition differential  Variable amount based on hours enrolled</td>
<td>Students from TX, MS, LA, KS, MO, OK or TN must have a 3.00 GPA. Entering freshmen must score 24 on the ACT (1090 SAT); Transfer students must have 24 credit hours and a 3.00 GPA.</td>
<td>Apply for admission. No scholarship application is required. Deadline: on a rolling basis until funds are exhausted</td>
<td>Renewable with completion of 30 hours per academic year, 3.00 minimum GPA. Up to 4 years (5 years for students in Architecture or the Master of Arts in Teaching program).</td>
</tr>
<tr>
<td>University Scholarship</td>
<td>$4,000 per year</td>
<td>Considerations made for Arkansas residents with a minimum 3.50 GPA and in the top 5-10% of entering freshman applicant pool. Competitively awarded.</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Criteria same as for Chancellor’s Merit Scholarship. (see above)</td>
</tr>
<tr>
<td>University of Arkansas Leadership Award</td>
<td>$3,000 per year</td>
<td>Students who have demonstrated outstanding leadership qualities and potential. Competitively awarded.</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Criteria same as for Chancellor’s Merit Scholarship. (see above)</td>
</tr>
<tr>
<td>Silas Hunt Distinguished Scholarship</td>
<td>Variable awards from $5,000-$8,000</td>
<td>Students who have demonstrated outstanding academic leadership qualities and potential and are from under-represented communities, which include but are not limited to: under-represented ethnic and minority groups; students with interest in fields of study that do not attract members of their ethnicity or gender; under-represented counties in Arkansas; or a first-generation college student. Competitively awarded.</td>
<td>Complete Entering Freshmen Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Criteria same as for Chancellor’s Merit Scholarship. (see above)</td>
</tr>
<tr>
<td>Transfer Student Scholarship</td>
<td>$2,000 per year</td>
<td>Strong academic performance in transfer college credit earned from an Arkansas two-year Institution and 3.50 GPA. Competitively awarded with preference give to students completing an Associates degree.</td>
<td>Apply for Transfer Students Scholarship Application (<a href="http://scholarships.uark.edu">http://scholarships.uark.edu</a>)</td>
<td>Cumulative 3.00 GPA and 30 hours at the end of 2 years or 4 semesters of each award year (3 years or 6 semesters for students in Architecture or the Master of Arts Teaching program).</td>
</tr>
</tbody>
</table>
Financial Aid and Scholarships

Scholarships, Grants, and Other Awards for Non-Resident Students

See page 33 in Fees & Costs.

COLLEGE AND DEPARTMENTAL SCHOLARSHIPS

The following college and departmental scholarships are available to entering freshmen at the University of Arkansas. Complete addresses and phone numbers of the colleges, schools, or departments listed below may be found in the respective college or school sections of this catalog.

School of Architecture

The School of Architecture offers a limited number of scholarships at various amounts to entering freshmen in any of the degree programs offered by the School. Several scholarships are renewable annually to the recipient who maintains all the requirements of the scholarship. Upon graduation or forfeiture by the recipient, another scholarship is awarded.

In order to be considered for any of the above scholarships, students are required to submit a portfolio of at least three (3) pieces of creative work. These pieces can include drawings, sketches, or paintings, but should not include computer-aided drawings or floor plans. Additionally, a one-page resume should accompany the portfolio submission. Deadline for submission is May 1.

Many upper level scholarships are available to continuing students. Applications are available in the fall and recipients selected in the spring for the following academic year. For more information contact the School of Architecture Academic Advising Center at (479) 575-2399.

J. William Fulbright College of Arts and Sciences

The J. William Fulbright College of Arts and Sciences offers many outstanding scholarship opportunities. Collectively, Fulbright’s 19 departments offer more than 100 scholarships and awards. At the college level, 12 scholarships benefit students in the arts and sciences. For comprehensive information about these awards, call 479-575-4801 or visit the Web at http://www.uark.edu/~arsc/students/scholarships.html.

Three college-wide scholarships merit special attention: Through the Sturgis Fellowship Program, Fulbright College offers premier scholarships worth $50,000 over four years to exceptionally talented students with the intellectual potential to become future leaders in society. In addition, all honors students are eligible to apply for research and study abroad funding through the Sturgis Grants Program. For information or an application, contact Director of Honors Studies at 479-575-2509.

The King Fahd Center for Middle East and Islamic Studies offers substantial four-year and two-year renewable scholarships to superior students majoring in Middle East Studies. The program also offers competitive funding for language study in Morocco, Tunisia, and Egypt. Funding for summer study abroad and research projects is considered on a case-by-case basis. Scholarship applications and information about the program can be obtained by contacting mst@uark.edu or calling 479-575-4157.

In honor of the Fulbright commitment to international education, the College offers the J.W. and Elizabeth W. Fulbright Endowed Scholarship, which supports a year of study abroad. To qualify, students must display an interest in one of the following fields: literature, history (including theatre, art, and music history), jurisprudence, philosophy, archaeology, comparative languages, and those aspects of the social sciences that employ philosophical or historical approaches. For more information about these opportunities, call 479-575-4801 or visit http://www.uark.edu/~arsc/students/scholarships.html.

Dale Bumpers College of Agricultural, Food and Life Sciences

A Margaret Stearns Fellowship in the amount of $9,000 will be awarded annually to an incoming freshman that has achieved outstanding academic performance, and is renewable up to three years.

The Division of Agriculture Land Grant Scholars Endowment Program provides up to 16 scholarships, dependent upon the availability of funds: the goal is to award one graduate fellowship at $11,000; two undergraduate scholarships $8,000 each, one to an entering freshman and the other to a new transfer student; 13 undergraduate scholarships for $4,000 to three entering freshman and ten new transfer students.

Dale Bumpers Distinguished Scholar Program provides one $2,500 scholarship to the outstanding transfer undergraduate and a $1,000 award to the outstanding Ph.D. graduate student and a $500 award for the outstanding M.S. graduate student.

Information and application procedures regarding these and approximately 200 departmental scholarships are available on the college Web site: http://www.uark.edu/depts/dbcafis/scholarships.html or call the Scholarship Administrator at 479-575-2253.

Sam M. Walton College of Business

The Boyer Fellowship is offered to Walton College students who have achieved at an outstanding level both in and out of the classroom. High grades and standardized test scores are required along with a strong commitment to service and the demonstration of exceptional leadership skills. Applicants for the Boyer Fellowship must demonstrate financial need.

Other scholarships are available through the departments of accounting, information systems, economics, finance, management, and marketing & logistics as well as through the Walton College’s general scholarship program. Scholarships are primarily awarded on the basis of academic achievement and/or financial need.

For further information on Walton College scholarships, contact the Undergraduate Programs Office at 479-575-4622.

College of Education and Health Professions

The College of Education and Health Professions offers limited numbers of scholarships in varying amounts. Recipient selection is based on a variety of attributes that are specific to each award. Attributes may include but are not limited to: the basis of promise, character, leadership skills, scholarship, or financial need.

Scholarship applications are available in November of each year. All current and future COEHP students are strongly encouraged to take advantage of these scholarship opportunities. For further information regarding scholarships and the application process, visit the Scholarships link on the College of Education and Health Professions’ Web site or contact the Office of the Associate Dean for Academic Affairs, 317 Graduate Education Building, 479-575-4280.

College of Engineering

The College of Engineering awards numerous scholarships and fellowships to entering freshmen, continuing students, transfer students, and graduate students. Most scholarships are based, primarily, on academic performance. However, scholarships are also awarded on the basis of financial need and diversity. Scholarships are available from both the college and its individual departments.

College scholarships are available to any engineering student while departmental scholarships are meant for students enrolled in a particular discipline of engineering. Students must be admitted to the University of Arkansas and accepted into the College of Engineering to qualify and receive either a college or departmental scholarship. The college has a
one-step application process that allows a student to be considered for all college level scholarships and departmental scholarships. For more information concerning scholarship and diversity opportunities, contact the College of Engineering Office of Diversity, Retention and Scholarships at 479-575-5009 or e-mail tic@engr.uark.edu.

**SPECIAL SCHOLARSHIPS AND CONDITIONS**

**ACT 1185**
Arkansas income taxpayers who earn a minimum of $5,500 in wages and, with their dependents, reside in a bordering state in a county or parish contiguous to an Arkansas county in which a public institution of higher education is located may enroll at the University of Arkansas and receive an out-of-state tuition award under the provisions of ACT 1185 of 1995, Section 34. The availability of funds may vary each year, and the students must provide certain documentation. Please contact the Office of Academic Scholarships at 479-575-4464 for more information.

**Arkansas Alumni Association Scholarships**
For information on Arkansas Alumni Association, see chart below.

**Music and Band**
The Department of Music offers scholarships (both music scholarships and band scholarships) for talented students who sing or play instruments. All scholarships are based on playing ability, academic achievement, and potential contribution to music department ensembles. Scholarships are renewable for up to five years (ten semesters), as long as the student meets the conditions specified on the scholarship letter or contract.

Music and band scholarships are available to music majors and to students majoring in other areas who participate in certain ensembles. All scholarships require an audition. To set up an audition, contact the music department at 479-575-4701 or the band office at 479-575-4100.

**Air Force and Army ROTC**
The Air Force and Army Reserve Officer Training Corps programs offer a number of scholarship opportunities for entering freshmen and on-campus students. See the Reserve Officer Training Corps section of this catalog for detailed information.

**Veterans Benefits**
The University of Arkansas is approved by the Arkansas Department of Education for veterans and veterans’ beneficiaries who are working toward a degree. Veterans of recent military service, service members, members of reserve units, and the dependents of certain other servicemen may be entitled to educational assistance payments under the following programs: Title 38, Chapter 30, Montgomery GI Bill for Veterans; Title 38, Chapter 32, Veterans Educational Assistance Program (VEAP); Title 38, Chapter 35, Survivors and Dependents Education; and Title 10, Chapter 106, Montgomery GI Bill for Selective Reserves.

Students must be working toward a degree and following the curriculum outline for their objectives, since only specific courses may be applied toward VA certification and graduation. Students eligible for educational benefits may contact the Office of the Registrar for further information.

Detailed information regarding stipends and housing is provided in the chapter “Reserve Officer Training Corps.”

<table>
<thead>
<tr>
<th>ARKANSAS ALUMNI ASSOCIATION SCHOLARSHIPS</th>
<th>Name</th>
<th>Annual Award</th>
<th>Eligibility Criteria</th>
<th>Application Procedure</th>
<th>Renewal Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumni Association Endowed Scholarship</td>
<td>$5,000 per year for four years</td>
<td>Incoming freshmen with a minimum GPA of 3.60 and 24 ACT or 1090 SAT</td>
<td>Request applications on the web (arkalum.org), by e-mail <a href="mailto:scholarships@razorback-road.com">scholarships@razorback-road.com</a> or by phone 1-888-ARK-ALUM.</td>
<td>3.00 GPA and 27 hours earned the first year, and a 3.2 GPA on 30 hours thereafter.</td>
<td></td>
</tr>
<tr>
<td>Arkansas License Plate, 'Roads' Scholarship/Alumni Board of Directors Scholarship</td>
<td>$1,000 per year for four years</td>
<td>Applicant finalists from the Alumni Association Endowed Scholarship who are residents of Arkansas. Non-Resident finalist will receive equivalent Alumni Board of Directors Scholarship.</td>
<td>Applications from the Alumni Endowed Scholarship will be considered.</td>
<td>3.00 GPA and 27 hours earned the first year, and a 3.20 GPA on 30 hours thereafter.</td>
<td></td>
</tr>
<tr>
<td>Alumni Chapter Scholarships</td>
<td>Variable amount based on chapter funds</td>
<td>Minimum GPA of 3.50 and 24 ACT</td>
<td>Considered from both the Alumni Scholarship application and private chapter applications.</td>
<td>Varies from chapter to chapter</td>
<td></td>
</tr>
<tr>
<td>Alumni Legacy Scholarship</td>
<td>Out-of-state tuition differential. Variable amount based on hours enrolled</td>
<td>Non Resident students with a 3.0 GPA and 24 ACT with a parent who graduated from the UofA and is an alumni association member.</td>
<td>Complete a data form located on the web (arkalum.org) or contact the alumni scholarship office (1-888-ARK-ALUM).</td>
<td>Renewable for up to 8 semesters with the completion of 24 hours and a cumulative 3.00 GPA per year.</td>
<td></td>
</tr>
<tr>
<td>Alumni Legacy Tuition Reduction Grant</td>
<td>One half of the out-of-state tuition differential. Variable amount based on hours enrolled</td>
<td>Non Resident students admitted with degree-seeking status with a parent who graduated from the UofA and is an alumni association member.</td>
<td>Complete a data form located on the web (arkalum.org) or contact the alumni scholarship office (1-888-ARK-ALUM).</td>
<td>Renewable for up to 10 semesters with the completion of 24 hours and a cumulative 2.00 GPA per year.</td>
<td></td>
</tr>
</tbody>
</table>
Orientation and Registration

All new undergraduate students, both freshmen and transfer, are expected to attend an orientation session preceding their enrollment. The orientation program is designed to introduce every aspect of the university community to our students, enabling them to establish a bond with the institution and those here to support them. A significant aspect of this experience will be to provide students with information about the policies, support systems, and resources of the University, while engaging them with their advisers in the appropriate academic programs. To this end, students should complete the orientation program prepared to register for classes and ready to embark upon their academic careers. Students who attend the orientation program register during that time.

REGISTRATION

Undergraduate students, including students not declaring a major, must enroll in one of six academic units: the J. William Fulbright College of Arts and Sciences; the Dale Bumpers College of Agricultural, Food and Life Sciences, the Sam M. Walton College of Business, the College of Education and Health Professions, the College of Engineering, or the School of Architecture. Information regarding registration periods and procedures is found on the Web site of the Registrar’s Office at http://www.uark.edu/registrar/.

Registration Periods

Students must register during one of the formal registration periods. Currently enrolled students are expected to register during the priority registration held each semester for the following semester. For additional registration periods check the Web site of the Registrar’s Office at http://www.uark.edu/registrar/. New students (freshmen and transfers) are expected to register during orientation. New students not already registered during orientation should register during the open registration period that immediately precedes the beginning of classes each semester. There is a late registration period of five days at the beginning of fall and spring semesters and a one- or two-day late registration period at the beginning of the summer sessions, but students may find that many classes are filled.

Student Addresses

It is the responsibility of all students to maintain and correct their addresses with the University and to report any change of address promptly in writing to the Registrar’s Office or at http://www.isis.uark.edu/. Failure to do so may result in undelivered official correspondence and announcements.

Many important announcements are sent to the students through University assigned e-mail accounts, which should be checked regularly. Important academic announcements are frequently sent to the student’s University assigned e-mail account. Students must check this account frequently to avoid missing critical notices.

Identification Cards

Identification cards are made at orientation and at the ID Card Office during the year. Several privileges on campus require an ID card, and it can be used as a debit card for purchases at various locations throughout the campus. Part-time students are also eligible for a card.

Academic Advising

Academic advising is an active, ongoing exchange between the advisers and students, grounded in teaching and learning. Advising is based on students gaining accurate and appropriate information and direction to help make their educational experience relevant, coherent, and meaningful. It is a process that assists students in connecting with the University of Arkansas, making thoughtful decisions related to their academic experiences, and maximizing their educational and career opportunities. Quality academic advising is essential to achieving the University’s vision for a “student-centered research university serving Arkansas and the world.”

While procedures may vary among schools and colleges, all successful academic advising should include the following:

• A mutual respect between adviser and student with the student possessing final responsibility for successful completion of a degree.
• A developmental and educational process that occurs over time.
• Consideration of individual students’ interests, abilities, and needs.
• A collaborative effort to connect students to campus resources and services.
• Reasonable availability and accessibility to advisers.
• Interpretation of University of Arkansas, college, and departmental rules and courses.
• A student’s understanding of the purpose and nature of the university core courses.
• Recommendation of appropriate courses.
• A student’s understanding of and progress toward academic requirements.
• General information regarding career options and opportunities, with appropriate referrals as necessary.
• Respect for students’ ethnic and racial heritage, age, gender, culture, national origin, sexual orientation, and religion, as well as their physical, learning, and psychological abilities.
• An understanding of and adherence to laws and regulations that relate to academic advising.
• Adherence to the highest principles of ethical behavior.
  The University is committed to developing each student to his or her fullest potential. To this end, programs in each college have been established to improve the academic achievement and persistence of students on academic warning and of other students in need of academic assistance. Such assistance is provided through a variety of instructional and informational services.

Arkansas State Requirements for Developmental Course Placement
Arkansas law specifies that all first-time entering freshmen enrolled in a bachelor’s degree program will be placed in either college-level credit courses in English and mathematics or remedial courses in English composition, reading, and mathematics on the basis of their scores on specified tests.
• Students who score below 19 on the English section of the ACT or below 470 on the verbal score of the SAT must enroll in Remedial English 0003, which does not carry degree credit.
• Students who score below 19 on the reading section of the ACT or below 470 on the verbal score of the SAT must enroll in Developmental Reading CIED 0003, which does not carry degree credit.
• Students who score below 19 on the mathematics section of the ACT or below 460 on the quantitative portion of the SAT must enroll in Remedial Math 0003, which does not carry degree credit. (The Mathematical Sciences Department requires higher ACT/SAT scores for students to be placed in Math courses above MATH 0003. Please see the Course Descriptions for MATH for details)
• Students whose Mathematics Placement Test (MPT) scores qualify them for placement in a higher-level mathematics course, such as MATH 1203, may enroll in that course. Students will be required to register for these courses during their first term at the University and, if necessary, in subsequent terms until passing grades have been earned in all required courses. Students must successfully complete any required developmental course in English before degree credit for freshman English can be awarded. Students must successfully complete any required developmental course in mathematics before enrolling in a college-level mathematics course. Students who need further information or clarification regarding this law are encouraged to discuss this with their academic adviser or dean.

Courses That Do Not Count toward a Degree
The following courses do not count toward degree credit in any college or school ENGL 0003, MATH 0003, and CIED 0003.

The following courses do not count toward any degree in the College of Engineering: MATH 1203 College Algebra, MATH 1213 Plane Trigonometry, MATH 1285 Pre-calculus Mathematics, and ENGL 2003 Intermediate Composition.

Registration for Grades of Pass-Fail
Students in some programs may register to take certain courses on a pass-fail basis. In such cases, a mark of “CR” (passed) or a grade of “F” (failed) will be recorded.

Students in the J. William Fulbright College of Arts and Sciences, the School of Architecture, and the Dale Bumpers College of Agricultural, Food and Life Sciences are eligible to enroll for certain courses on a pass-fail basis under the following conditions:
1. That such registration be approved by the student’s adviser.
   (Students in Agricultural, Food and Life Sciences must also have the approval of their academic dean.)
2. That the student has attained sophomore rank or higher.
3. That the student is not on academic warning and has achieved a cumulative grade-point average of at least 2.00.
4. That such enrollment be limited to one course per semester.
5. That the total enrollment on a pass-fail basis be limited to no more than 18 hours in any student’s degree program.
6. That the courses involved are not part of the student’s major and are not specifically required as part of the student’s degree program.
7. Normally, registration for pass-fail credit will be completed prior to the final date for changing registration by adding a course. Grades for students enrolled on a pass-fail basis will be reported on final grade rosters in the usual manner. The dean’s office will review each report and will authorize the registrar to record “CR” or “F” on the student’s official academic record, as appropriate. The “CR” marks will not be counted in grade point averages but will increment hours earned; the “F” grade will be counted in the grade point average.

Students in the College of Education and Health Professions may enroll in courses on a pass-fail basis under the same conditions but only in courses offered by the Fulbright College of Arts and Sciences and the College of Education and Health Professions. Walton College of Business and College of Engineering students may not take courses on a pass-fail basis.

Undeclared Major
Degree-seeking students who are undecided about their choice of a major field of study will be considered to have an undeclared major. However, all undergraduate students must enroll in one of the colleges or schools. Each of these academic units makes provisions for undeclared majors, and each has its own rules concerning the point at which a student must declare a major. Again, academic advisers will be of great assistance in determining the college or school in which a student with an undeclared major should enroll.

Walton College of Business students must complete specific lower-division courses, a process that normally takes four semesters. All engineering students are classified as pre-engineering students until they have satisfied the pre-professional program, which is normally completed during the freshman year.

Registration for Audit
Students wishing to audit a class should contact the instructor teaching that class and request permission to audit. If the instructor approves the audit, the academic department will register the student in that class as an audit. Auditing of a class is allowed on a space-available basis, and a student must pay fees for that class. The instructor shall notify the student of the requirements for receiving the mark of “AU” for the course being audited. The instructor and the student’s dean may drop a student from a course being audited if the student is not satisfying the requirements specified by the instructor. The student is to be notified if this action is taken. The only grade or mark that may be awarded is “AU.”

Adding and Dropping Courses
A currently enrolled student who has registered during the advance registration period should make any necessary or desired schedule adjustments such as adding or dropping courses or changing course sections during the schedule-adjustment period of the same semester. Students may also add or drop courses during the first five class days of a fall or spring semester. Students who drop classes by the end of the first week of classes in the fall and spring semesters will have their fees adjusted. (Refer to the Treasurer’s Office Web site for summer dates). Fee adjustments are not done for classes dropped
after the first week of class. Drops and withdrawals are two different functions. In a drop process, the student remains enrolled. The result of the withdrawal process is that the student is no longer enrolled for the term. The two functions have different fee adjustment policies. Fee adjustment deadlines for official withdrawal are noted below.

A student may drop a course during the first 10 class days of a fall or spring semester without having the drop shown on the official academic record. After the first 10 class days, and before the drop deadline of the semester, a student may drop a course, but a mark of “W,” indicating the drop, will be recorded. A student may not drop a full-semester course after the Friday of the tenth week of classes in a fall or spring semester. Drop-add deadlines for partial semester courses and summer classes are listed on the fall and summer calendars located on the Web site of the Registrar’s Office.

Withdrawal from Registration

Withdrawal from the University means withdrawing from all classes that have not been completed up to that time. A student who leaves the University voluntarily before the end of the fall or spring semester must complete an exit interview and then drop all classes on the student registration system or notify the Office of the Registrar in writing. Withdrawal may occur anytime during the semester through the last day of classes. Withdrawal deadlines for summer sessions are listed on the summer calendar located on the Web site of the Registrar’s Office; summer withdrawals do not require an exit interview. Students who do not withdraw officially from a class they fail to complete will receive an “F” in that class. Students with holds on their registration should contact the Office of the Registrar for assistance in processing their official withdrawal from the University.

The deadline for a full fee adjustment for an official withdrawal is the day before the start of classes for that term. After that date a $45.00 withdrawal fee will be charged, and a percentage of the fees will be refunded. Refer to the Web site of the Treasurer’s Office for the deadlines and percentages.

Course Loads

While University offices and services typically recognize the full-time status of students who have enrolled for a minimum of 12 semester hours, students should bear in mind that this minimum number of hours is insufficient to allow them to complete a four-year degree program in eight academic semesters (four years). Since most University degree programs require a minimum of 124 semester hours, or 31 hours per year, a student should earn 15 to 16 hours per semester to complete most degree programs in four years (eight semesters). The University offers degree-completion plans; see the Web site of the Registrar’s Office or the Academic Regulation section of this catalog.

Number of Hours Allowed per Semester

1. Students who wish to carry more than 18 hours per semester must first obtain the permission of their academic deans.
2. Students who wish to carry more than 21 hours per semester must first request and receive favorable action from the Academic Standards Committee.
3. Students on academic warning may not carry more than 12 hours per semester.
4. Students on academic suspension who choose the limited enrollment option may not carry more that 9 hours for that semester unless permission has been requested and granted by the Academic Standards Committee.
5. Students who wish to exceed the normal summer school load must have the approval of their academic deans to take seven hours in five- or six-week sessions or 13 to 14 hours in 10- or 12-week sessions. Students who wish to take more than seven hours in one five- or six-week session or more than 14 hours in one 10- or 12-week session must first receive favorable action from the Academic Standards Committee.
6. For disabled students, less than 12 hours may be certified as full-time with the approval of the student’s dean and the concurrence of a physician or a licensed examiner.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Course Hours Passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>&lt;30</td>
</tr>
<tr>
<td>Sophomore</td>
<td>&gt;29 but &lt;60</td>
</tr>
<tr>
<td>Junior</td>
<td>&gt;59 but &lt;90</td>
</tr>
<tr>
<td>Senior</td>
<td>≥ 90</td>
</tr>
</tbody>
</table>

STUDENT STANDING

Definitions of undergraduate student classification are as follows:
Educational expenses will vary according to a student’s course of study, personal needs, and place of residence. All fees, charges, and costs quoted in this catalog are subject to change without notice. A survey tool for tuition and fee estimation is available at http://avcf.uark.edu/TREAWeb/tuition.asp?pagestate=Estimate.

Financial obligations to the University must be satisfied by the established deadlines. Payment may be made at the University Cashier’s Office in the lobby of Silas H. Hunt Hall by cash, personal check, money order, certified check, or VISA, MasterCard, or Discover credit cards. Payment may also be made via the World Wide Web. To make payments online go to ISIS at https://isis.uark.edu/. Payment options are available on the “finances” page.

Acceptance of payment for fees does not imply academic acceptance to the University.

ESTIMATED NECESSARY EXPENSES PER SEMESTER

Estimates of necessary expenses for one semester of the 2005-2006 academic year for a typical undergraduate student taking 15 credit hours per semester at the University of Arkansas:

<table>
<thead>
<tr>
<th></th>
<th>Undergraduate Resident</th>
<th>Undergraduate Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition¹</td>
<td>$2,295.15 ($153.01/hr)</td>
<td>$6,361.65 ($424.11/hr)</td>
</tr>
<tr>
<td>University Fees²</td>
<td>451.80</td>
<td>451.80</td>
</tr>
<tr>
<td>COLG Fee³</td>
<td>157.20</td>
<td>157.20</td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>$2,904.15</td>
<td>$6,970.65</td>
</tr>
<tr>
<td>Room and Board⁴</td>
<td>$3,261.00</td>
<td>$3,261.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$6,165.15</td>
<td>$10,231.65</td>
</tr>
</tbody>
</table>

Other variable costs per year:
*Books, supplies, and lab fees $956.00
*Personal expenses and travel $3,112.00

When paying tuition, room and board, and associated fees, anticipated financial aid for a current semester may be deducted when adequate documentation is provided to the University Cashier’s Office in Silas H. Hunt Hall. Adequate documentation includes, but is not limited to, award notices, guarantee notices, scholarship letters, and promissory notes.

The latest information regarding costs and other aspects of University life may be obtained by calling or writing the Office of Admissions, 200 Silas H. Hunt Hall, for more information about residency classification review procedures.

Academic Year
Undergraduate students are assessed tuition fees of $153.01 per credit hour. Students with out-of-state residency status are assessed additional tuition fees of $271.11 per credit hour.

Summer Sessions
Undergraduate students are assessed tuition fees of $153.01 per credit hour. Undergraduate students with out-of-state residency status are assessed additional tuition fees of $271.11 per credit hour.

TUITION FEES
Students classified as “in-state” for fee payment purposes are assessed tuition fees. Students classified as “out-of-state” for fee payment purposes are assessed additional tuition fees.

Official policies of the University of Arkansas Board of Trustees provide the basis for classifying students as either “in-state” or “out-of-state” for purposes of paying student fees. Board policies relating to residency status for fee payment purposes are included in Appendix A of this catalog. Out-of-state students who question their residency classification are encouraged to contact the Office of Admissions, 200 Silas H. Hunt Hall, for more information about residency classification review procedures.

1. Students enrolled in the Walton College of Business courses are charged differential tuition at $21.42 per credit hour more than standard undergraduate, in-state tuition. Architecture students are charged a differential tuition of 7.65.

2. University fees include the following:
   - Arkansas Assessment of General Education fee $5.10
   - Health, physical education and recreation fee 49.20
   - Student Health Center debt fee 12.75
   - Enhanced Learning Center 13.95
   - Technology fees are calculated at $2/credit hour 30.00
   - Transit fee 32.10
   - Network Infrastructure and Data Systems fee ($7.35/credit hour) 110.25
   - Safe Ride fee 3.30
   - Distinguished Lecture fee 6.75
   - Student Readership fee 8.25

3. Teaching Equipment and Laboratory Enhancement (COLG) fee. This figure reflects the per credit hour undergraduate fee for the College of Arts and Sciences. To obtain the per credit hour undergraduate fee for all colleges, view the Tuition Rate Schedule at http://avcf.uark.edu/TREAWeb/tuition.asp?pagestate=Estimate

4. Weighted average expenses for living in a residence hall, double occupancy, with an unlimited meal plan. Actual room and board fees vary from $2,948 to $3,119 per semester.
### FEES*

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Amount**</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARKANSAS ASSESSMENT OF GENERAL EDUCATION FEE</td>
<td>Board of Trustees approved fee supporting the assessment requirements mandated by Act 874 of the General Assembly in the 1993 Regular Session.</td>
<td>$.34</td>
</tr>
<tr>
<td>ARKANSAS UNION FEE</td>
<td>Supports the renovation, expansion, and partial operational costs of the Union</td>
<td>2.87</td>
</tr>
<tr>
<td>ASSOCIATED STUDENT GOVERNMENT FEE</td>
<td>Allocated to registered student organizations</td>
<td>.60</td>
</tr>
<tr>
<td>DISTINGUISHED LECTURE FEE</td>
<td>Pays for two speakers, one in the spring semester and one in the fall. Speakers represent 1) Arts and Entertainment Industry or 2) World Leader or Newsmaker. One speaker from each group is invited each year. Speakers are chosen by the Distinguished Lectures Committee, which is represented by students, staff, and faculty. Contact ASG for information on how to become a member of the committee. The lectures or presentations are free to students via the fee.</td>
<td>.45</td>
</tr>
<tr>
<td>ENHANCED LEARNING CENTER</td>
<td>Provides academic support, including individual and group tutoring and study skills workshops.</td>
<td>.93</td>
</tr>
<tr>
<td>FINE ARTS ACTIVITY FEE</td>
<td>Supports cultural events free of charge, or with minimal charge, to students. Events include presentations in music, theater, drama, opera, visual arts, creative writing, and public speaking. Most are held on campus or at the Walton Arts Center. Fulbright College allocates the proceeds of the fee to support cultural programming.</td>
<td>.27</td>
</tr>
<tr>
<td>HEALTH, PHYSICAL EDUCATION, AND RECREATION FEE</td>
<td>Board of Trustees mandated fee supporting various physical education activities including intramural programs. Students are allowed access to gyms, the pool, fitness center, sauna, racquetball courts, and the indoor track.</td>
<td>3.28</td>
</tr>
<tr>
<td>MEDIA FEE</td>
<td>The University's student publications, specifically the Arkansas Traveler newspaper and the Razorback yearbook, are partially funded by the media fee. Students reserving a copy are provided with a Razorback yearbook.</td>
<td>.69</td>
</tr>
<tr>
<td>NETWORK INFRASTRUCTURE AND DATA SYSTEMS FEE</td>
<td>Provides support for the development and operation of the campus network, including electronic equipment, servers with software, and cabling. The network systems serve computer labs, academic and administrative buildings, residence halls and off-campus access facilities. Data systems will enable Web-based access to the University's information systems for students, faculty, and staff. Also provides support for upgrades and replacement of the student information system.</td>
<td>7.35</td>
</tr>
<tr>
<td>SAFE RIDE FEE</td>
<td>Generates necessary funds for the Safe Ride Program, which is a safety-oriented program available during the fall and spring semesters. The program provides a free ride home (within Fayetteville city limits) from any Fayetteville location to all UA students, 10 p.m. to 2:30 a.m. Thursday through Saturday.</td>
<td>.22</td>
</tr>
<tr>
<td>STUDENT ACTIVITY FEE</td>
<td>Funds University Programs. Students are admitted free to numerous programs presented throughout the year, except for major, promoted concerts.</td>
<td>.88</td>
</tr>
<tr>
<td>STUDENT HEALTH DEBT FEE</td>
<td>Pays the debt service for the construction of the new Student Health Center.</td>
<td>.85</td>
</tr>
<tr>
<td>STUDENT HEALTH FEE</td>
<td>Covers the cost of office visits by physicians, registered nurses, and other health professionals, medical evaluations, women's health visits, and counseling and psychological service visits. Other services covered by the health fee include health promotion and education and 24-hour emergency care for counseling and psychological needs.</td>
<td>6.40</td>
</tr>
<tr>
<td>TECHNOLOGY FEE</td>
<td>Provides improvements in computer access for students: increasing dial-up ports, network access, lab support, training programs, and improvements in computing facilities.</td>
<td>2.00</td>
</tr>
<tr>
<td>TRANSIT FEE</td>
<td>Helps fund the Razorback Bus Transit System, which services the campus and neighboring community year round.</td>
<td>2.04</td>
</tr>
<tr>
<td>RAZORBACK READERSHIP FEE</td>
<td>Provides national and local newspapers on campus, free for students.</td>
<td>.30</td>
</tr>
<tr>
<td>HEADLINER CONCERTS FEE</td>
<td>Allows two major concerts, free to UA students, each academic year.</td>
<td>.55</td>
</tr>
<tr>
<td>WALTON COLLEGE OF BUSINESS COURSE FEES</td>
<td>Any student taking any undergraduate course in the Walton College of Business will be assessed differential tuition</td>
<td>21.42</td>
</tr>
</tbody>
</table>

* Assessed each academic semester for which the student is enrolled: fall, spring, and summer  
** per credit hour.
### Fee and Cost Estimates

#### Special Course and Program Fees

Some courses and programs are assessed special fees (see left).

#### Program/Service Specific Fees

Some programs have specific fees connected to specific services required (see chart below).

<table>
<thead>
<tr>
<th>Program/Service Specific Fees</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language Placement Test (ELPT)</td>
<td>$10.00</td>
</tr>
<tr>
<td>Graduation fee for baccalaureate degree</td>
<td>25.00</td>
</tr>
<tr>
<td>I.D. Card</td>
<td></td>
</tr>
<tr>
<td>First card</td>
<td>20.00</td>
</tr>
<tr>
<td>Each replacement card</td>
<td>18.00</td>
</tr>
<tr>
<td>Infant Development Center for UA</td>
<td></td>
</tr>
<tr>
<td>Student Families: (40 hrs/week)</td>
<td></td>
</tr>
<tr>
<td>Materials per semester</td>
<td>25.00</td>
</tr>
<tr>
<td>Infants and Toddlers per week</td>
<td>200.00</td>
</tr>
<tr>
<td>Installment Payment Plan</td>
<td>25.00</td>
</tr>
<tr>
<td>International student (non-immigrant) application fee</td>
<td>50.00</td>
</tr>
<tr>
<td>International student per semester service fee (non-immigrants)</td>
<td>57.89</td>
</tr>
<tr>
<td>Late payment</td>
<td></td>
</tr>
<tr>
<td>On fifth day of classes if balance has not been paid</td>
<td>50.00</td>
</tr>
<tr>
<td>Additional fee at Nov. 30, April 30, and July 31 for fall, spring, and summer, respectively, if payment has not been made</td>
<td>50.00</td>
</tr>
<tr>
<td>Mandatory international student health insurance</td>
<td>933.00</td>
</tr>
<tr>
<td>New student orientation:</td>
<td></td>
</tr>
<tr>
<td>First Year Experience (New Admits Only)</td>
<td>80.00</td>
</tr>
<tr>
<td>Parents</td>
<td>40.00</td>
</tr>
<tr>
<td>Nursery School in Home Economics</td>
<td>800.00</td>
</tr>
<tr>
<td>Parking Permit (per vehicle)</td>
<td></td>
</tr>
<tr>
<td>Off campus</td>
<td>38.85</td>
</tr>
<tr>
<td>On campus</td>
<td>57.75</td>
</tr>
<tr>
<td>Residence Hall nonrefundable application fee (new students only)</td>
<td>35.00</td>
</tr>
<tr>
<td>Study Abroad Service fee</td>
<td>10.00</td>
</tr>
<tr>
<td>Testing Fees (Actual Cost Plus Handling Fee Listed)</td>
<td>15.00</td>
</tr>
<tr>
<td>Transcript Fee - Official Copy</td>
<td>5.00</td>
</tr>
<tr>
<td>Undergraduate application for admission</td>
<td>40.00</td>
</tr>
<tr>
<td>Additional late application fee</td>
<td>25.00</td>
</tr>
<tr>
<td>Withdrawal from the University fee</td>
<td>45.00</td>
</tr>
</tbody>
</table>
TEACHING EQUIPMENT AND LABORATORY ENHANCEMENT FEES

These fees provide and maintain state-of-the-art classroom equipment and instructional laboratory equipment. These fees vary, based upon the student’s college of enrollment.

During the regular fall, spring and summer academic semesters, these fees are assessed on a per credit hour basis (see chart below).

<table>
<thead>
<tr>
<th>College or School</th>
<th>Per Credit Hour Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural, Food and Life Sciences, Bumpers College of</td>
<td>$ 8.08</td>
</tr>
<tr>
<td>Architecture, School of</td>
<td>15.92</td>
</tr>
<tr>
<td>Arts and Sciences, Fulbright College of</td>
<td>10.48</td>
</tr>
<tr>
<td>Business, Walton College of</td>
<td>17.45</td>
</tr>
<tr>
<td>Education and Health Professions</td>
<td>8.32</td>
</tr>
<tr>
<td>Engineering</td>
<td>25.27</td>
</tr>
</tbody>
</table>

FEE ADJUSTMENTS

Academic Semesters and Summer Sessions

Students who officially withdraw (dropping ALL classes that have not been completed up to that time) from the University of Arkansas during the regular fall or spring semesters receive a cancellation of fees (see chart below), less an Administrative Withdrawal fee of $45. Students who officially withdraw from a summer session or who drop classes in the summer also receive a cancellation of fees (see chart below).

<table>
<thead>
<tr>
<th>Adjustment Percentage</th>
<th>If withdrawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>before the first day of the semester/session</td>
</tr>
<tr>
<td>90%</td>
<td>through the first 10% of days in the semester/session</td>
</tr>
<tr>
<td>80%</td>
<td>through the second 10% of days in the semester/session</td>
</tr>
<tr>
<td>70%</td>
<td>through the third 10% of days in the semester/session</td>
</tr>
<tr>
<td>60%</td>
<td>through the fourth 10% of days in the semester/session</td>
</tr>
<tr>
<td>50%</td>
<td>through the fifth 10% of days in the semester/session</td>
</tr>
<tr>
<td>40%</td>
<td>through the sixth 10% of days in the semester/session</td>
</tr>
</tbody>
</table>

Billing Statements

Students who pre-register for a semester will be mailed an invoice approximately three weeks prior to the first day of classes. Invoices will be mailed to the student’s permanent address unless a separate billing address has been filed with the Treasurer’s Office.

It is the responsibility of the student to ensure a correct billing address on the Student Information System (See Addresses, below). The late fee will not be waived because an invoice was not received.

Late Fees

Students who register for the fall 2006 and spring 2007 semesters are required to pay all registration-related fees and housing charges by the posted payment deadline. Students who fail to pay all registration fees and housing charges or who execute an installment payment plan by the deadline may be assessed a late payment fee equal to the outstanding balance, not to exceed $50.00.

Any student with an outstanding balance, to include registration-related fees and/or housing charges, by the last payment deadline will be assessed a late payment fee equal to the outstanding balance, not to exceed $50.00.

Disbursement of Refund Checks

Disbursement of refund checks due to overpayments by scholarships, loans, and/or grants will be mailed approximately five (5) days prior to the start of classes. Checks will be mailed to the student’s permanent address unless a check address has been established with the student accounts office.

Addresses

Students may create a billing address, which will be used specifically for billing statements, and a check address, which will be used specifically for overpayment checks. These addresses may be created in addition to the local and permanent addresses. If a billing or check address is not created, the default address will be the permanent address. The student may change their address on the ISIS Web site in Student Accounts Self Service.

WAIVER OF TUITION AND FEES FOR SENIOR CITIZENS

Students who are 60 years of age or older and show proper proof of age may have tuition and fees waived. This waiver is limited to credit courses. Admission and enrollment under these conditions is open only on a “space available” basis in existing classes. Enrollment during Priority Registration periods is not allowed.

ROOM AND BOARD

University Housing

(Rates are subject to change)

Single freshmen under 21 years of age are required to live in University residence halls, fraternity or sorority houses, or with their parents, unless permission to live off-campus has been obtained through University Housing. Permission to reside off-campus is granted on a semester basis and must be obtained prior to enrolling or prior to the semester in which off-campus residency is desired.

Costs of room and board in University residence halls for one semester during the 2006-2007 academic year range from $2,948 to $3,119 for double occupancy rooms and with an unlimited meal plan. Single rooms are additional and are available on a first-come, first-serve basis. There is an additional $27.50 laundry run-free operation fee for residence hall tenants.

Housing for married students, students with family status, non-traditional, graduate, and law students is limited and requires early application. Carlson Terrace, two-bedroom, unfurnished units with utilities paid cost $2,137.50 per semester.

Summer rates for room in University residence halls during summer sessions are $24.07 per day for a single. Charges start on the requested move-in day and run through the date of check-out.
Specific questions concerning on-campus living or meal plans may be directed to University Housing (479) 575-3951. Specific questions concerning sorority and fraternity living may be directed to the Office of Greek Affairs (479) 575-5001.

Off-Campus Housing
Students eligible to live off-campus may contact local real estate offices for rental information and availability.

OTHER GENERAL FEE INFORMATION

Checks tendered to the University are deposited immediately. The University does not accept postdated checks. Checks returned for “insufficient funds” (NSF checks) are generally presented for payment only once. Each check returned by a bank for any reason will be assessed a returned check fee. The University may, at its discretion, verify available bank funds for any checks written for payment of indebtedness before accepting a check.

The University of Arkansas reserves the right to withhold transcripts or priority registration privileges, to refuse registration, and to withhold diplomas for students or former students who have not fulfilled their financial obligations to the University. These services may also be denied students or former students who fail to comply with the rules governing the audit of student organization accounts or to return property entrusted to them.

Requests for exceptions to University’s fees, charges, and refund policies must be made in writing. Instructions for submitting requests for exceptions to the various fees, charges, and refund policies of the University may be obtained as follows:

For residence life and dining services fees, charges, and refund policies contact University Housing, Attention: Assistant Director for Business, Hotz Hall, 9th floor, (479) 575-3951.

For parking services fees, charges, and refund policies contact: Parking and Transit, Administrative Services Building, 155 Razorback Road, (479) 575-3507.

For other fees, charges, and refunds, contact the Treasurer’s Office, 215 Administration Building, Attention: Treasurer, (479) 575-5651.

Students receiving financial aid are strongly encouraged to have sufficient personal funds available to purchase books and to meet necessary expenses for at least one month at the start of school as some aid funds may not be available for disbursement.

Students are allowed to have automobiles at the University, although parking is quite limited. There is a parking permit and registration fee ranging from $40.89 to $394.03 for each vehicle, depending upon the parking option selected.

STUDENT RESIDENCE STATUS FOR TUITION AND FEE PURPOSES

Board Policy 520.8 (January 18, 1985, revised)

Determination of Residence Status

1. Purpose
The purpose of these regulations is to enable the administrative officers of the University of Arkansas to classify students for the purpose of paying student fees, as either “in-state” or “out-of-state,” so as to accord fairness and equity to the students of the University and to the public that provides support for the educational services provided by the University.

2. Initial Classifications
a. A student shall be admitted to the University in an “in-state” or “out-of-state” status for university fee purposes, as established under these regulations.

Except as otherwise provided under these regulations, a student classified as “in-state” for university fee purposes at the time of admission must have established a bona fide domicile in Arkansas and must have resided continuously in this state in that bona fide domiciliary status for at least six consecutive months prior to the beginning of the term or semester for which fees are paid.

b. A bona fide domicile is a home of apparent true, fixed, and permanent nature, a place of actual residing for all purposes of living that may be distinguished from a temporary sojourn in this state as a student. The person claiming domicile in Arkansas must provide evidence of permanent connection with the State of Arkansas and demonstrate the expectation of remaining in this state beyond graduation. For purposes of implementing these policies, the Administration is directed to articulate standards that will be applied in making the determination of residence.

c. Except as otherwise provided under these regulations, the domicile of an adult (18 years of age or older) or emancipated minor student shall be determined on the basis of his or her own domicile.

d. Except as otherwise provided under these regulations, the domicile and residence of an unemancipated minor student (less than 18 years of age) or an unmarried dependent who has not attained the age of 23 is legally that of the parents or surviving parent; or such other person legally standing in the place of a parent to the student and with whom the student in fact makes his or her home and who has been making substantial contributions to the support of the student for at least six consecutive months prior to the term or semester for which the fees are paid.

e. A student who cannot satisfy the criteria for Arkansas domicile and residence will be classified as an “out-of-state” student and will pay fees and tuition accordingly. The student on a temporary visa will be classified as a foreign student and will pay non-resident tuition and fees. A student who has been granted a permanent visa and has been domiciled in Arkansas for six consecutive months following receipt of the permanent visa shall be classified as an Arkansas resident for fee purposes.

f. The responsibility for registering under a proper classification for student fee purposes is placed upon the student. It is the duty of each student at each time of registration to call any question about residency classification status to the attention of the campus classification review officer in a timely fashion in order that the question may be settled (see IV Procedures).

g. The six-month period required in paragraph A of these regulations may be waived for persons, their spouse, and their unmarried children who have not yet attained the age of 23 (dependents are the spouse and unmarried children who are legal dependents as defined by the IRS) and who move to Arkansas with attendance at the University only by a by-product of the primary purpose of establishing domicile in this state.

h. An unmarried student who has not reached the age of 23 years having one parent residing in Arkansas (for at least six consecutive months immediately prior to the beginning of the term or semester in which the fees are to be paid) may be considered an “in-state” student for fee purposes, even if that student resided outside the state with the other parent before coming to Arkansas to attend the University.

i. Marriage is recognized as emancipation for both females and males.

j. The spouse of a person continuously domiciled in Arkansas (for at least six consecutive months immediately prior to the beginning of the term or semester in which the fees are to be paid) upon request shall be classified as “in-state” for fee purposes.
3. Reclassifications

a. The initial classification of a student will not prejudice a different classification for following terms or semesters. However, a student’s prior domicile is assumed to continue until he or she clearly establishes a new domicile in Arkansas (see 4. Procedures).

b. A student previously classified as “out-of-state” may be reclassified as “in-state” for fee purposes if he or she has established a bona fide domicile in Arkansas and has resided continuously in this state in that bona fide domiciliary status for at least six consecutive months prior to his or her reclassification by the University. In order for an adult or an emancipated minor to establish a bona fide domicile in Arkansas for fee purposes, he or she must have left the parental home, must have established in this state a home of a permanent character as manifested objectively by good faith acts, and must have the expectation of remaining in this state beyond graduation. The single fact of presence in Arkansas for at least six months of attendance as a student enrolled in the University of Arkansas, or any other educational institution, neither constitutes nor necessarily precludes reclassification as one domiciled in Arkansas, but will be a factor to be considered.

c. The Chancellor of each campus will designate a campus classification appeal officer to receive petitions from decisions made by the campus classification review officer. Each campus classification appeal officer may, in his or her discretion, make investigations, receive evidence, and conduct informal hearings. After considering the case, the campus classification appeal officer will render a decision and notify the affected student of the decision in writing. Any decision of the campus classification appeal officer may be appealed to the Vice President for Academic Affairs of the University of Arkansas System, who shall recommend final disposition to the President of the University.

d. Written notice of the appeals procedure will be provided to each student raising a question about his or her status with the campus residency classification review officer.

e. Determination of domicile will be based on a review of all pertinent facts, evidence, and circumstances that collectively show, in an objective and clear manner, the actual domicile of the student.

NOTE: In implementing these policies, it is presumed that dependent students who are classified as non-residents based upon parental/guardian domicile outside of Arkansas do not acquire Arkansas residency under Board of Trustees Policy 520.8 unless and until their parent(s)/guardian(s) have established a domicile in Arkansas, or the student has left the parental home and established a domicile in Arkansas evidenced by proof that he or she has established a home of a permanent character as manifested objectively by good faith acts, resided in Arkansas in bona fide domiciliary status for at least six consecutive months prior to his or her reclassification as an Arkansas resident, and demonstrates the expectation of remaining in this state beyond graduation.

4. Procedures

a. A student shall have the burden of establishing any claim that he or she is entitled to be treated as “in-state” for fee purposes. Persuasive evidence to that effect must be presented in writing and verified under oath by the student. Mere claims of local domicile and duration of stay are of little weight. A student who knowingly gives erroneous information in an attempt to evade the payment of “out-of-state” fees may be subject to dismissal from the University.

b. All disputed classifications for student fee purposes, whether at initial enrollment or subsequent enrollments, and all disputed reclassifications will be decided initially on each campus by a classification review officer designated by each Chancellor.

c. The Chancellor of each campus will designate a campus classification appeal officer to receive petitions from decisions made by the campus classification review officer. Each campus classification appeal officer may, in his or her discretion, make investigations, receive evidence, and conduct informal hearings. After considering the case, the campus classification appeal officer will render a decision and notify the affected student of the decision in writing. Any decision of the campus classification appeal officer may be appealed to the Vice President for Academic Affairs of the University of Arkansas System, who shall recommend final disposition to the President of the University.

d. Written notice of the appeals procedure will be provided to each student raising a question about his or her status with the campus residency classification review officer.

e. Determination of domicile will be based on a review of all pertinent facts, evidence, and circumstances that collectively show, in an objective and clear manner, the actual domicile of the student.

Reclassification Deadlines

Students who have established a bona fide domicile in Arkansas following initial classification as a non-resident must request reclassification if they want their status recognized for fee purposes. Applications and appropriate documentation must be received by the Office of the Registrar no later than the fifth class day (second class day of a summer session) of the term for which in-state fee assessment is requested. Applications received after the deadline will be considered for the next term. All fees are to be paid by published due dates. Students who receive a favorable decision after payment will be provided a refund of out-of-state fees paid. Please direct questions about residence classification review procedures to the Office of the Registrar, 146 Silas H. Hunt Hall.

Resident Status of Native Americans


Native American people in other states belonging to tribes that formerly lived in Arkansas before relocation, and whose names are on the rolls in tribal headquarters, shall be classified as in-state students for tuition and fee purposes, on all campuses of the University of Arkansas. Tribes so identified include the Caddo, Cherokee, Chickasaw, Choctaw, Creek, Delaware, Kickapoo, Osage, Peoria, Quapaw, Shawnee, and Tunica.

Resident Status of Members of the Armed Forces and Their Dependents

(Board Policy 520.7, “Fees for Members of Armed Forces and Dependents.” Revised January 18, 1985)

Effective January 1, 1975, members of the Armed Forces who are stationed in the State of Arkansas pursuant to military orders, and their unemancipated dependents, shall be entitled to classification as in-state students for fee paying purposes (per Arkansas stat. Ann. 80-3366).

Persons continuously domiciled in Arkansas for at least 12 consecutive months who enter active military service from this state and who maintain Arkansas as the permanent home of record while on active military duty, and their dependents (the spouse and unmarried children who are legal dependents of the military person as defined by the IRS), shall be entitled to classification as in-state students for fee paying purposes. This provision is forfeited if the military person does not return to Arkansas within twelve months after separation, discharge, or retirement from active duty.

Persons serving in active military service who demonstrate a change of bona fide domicile from another state to Arkansas at least twelve consecutive months prior to separation, discharge, or retirement from active military duty, and the dependents (the spouse and unmarried children who are legal dependents of the military person as defined by the IRS), shall be entitled to classification as in-state students for fee paying purposes. This provision is forfeited if the military person does not return to Arkansas within twelve months after separation, discharge, or retirement from active duty.

Resident Status of Students from Texarkana, Texas, and Bowie County, Texas

(Board Policy 520.10, Adopted November 16, 1984)

In accordance with the reciprocity agreement described in H.C.R. 32, signed by the Governor of Arkansas on February 12, 1965, Board Policy 520.10 states, “Residents of Texarkana, Texas and Bowie County, Texas, will be classified as in-state students for University fee purposes at the University of Arkansas.”
Academic Regulations

ACADEMIC HONESTY

(Campus Council, revised February 6, 1986)

Introduction

The University of Arkansas, Fayetteville, presents this policy as part of its effort to maintain the integrity of its academic processes. Academic honesty should be a concern of the entire University community, and a commitment to it must involve students, faculty, and administrators.

Students must understand what academic integrity is and what the most common violations are. With that understanding they must commit themselves to the highest standards for their own, as well as for their peers’, academic behavior.

Public support and encouragement of the faculty is a second critical component necessary to strengthen academic integrity on campus. Faculty members must be continually vigilant in the management of their classes, their assignments, and their tests.

Finally, the administration of the University must present to the students standards of academic integrity. Those standards must be part of a publicly recognized, understood, and accepted set of policies and procedures that can be applied consistently and fairly in cases of academic dishonesty.

It is the responsibility of each student, faculty member, and administrator to understand these policies. A lack of understanding is not an adequate defense against a charge of academic dishonesty.

With regard to the application of this policy, the University assures its support of faculty members and other employees of the University who are acting in good faith in the course and scope of their employment and in the performance of their official duties.

This policy is only a part of the University’s effort to promote academic integrity in all aspects of its programs. By necessity, this part discusses only prohibited acts and a process of applying sanctions. The ultimate goal, of course, is to provide an atmosphere that will make superfluous the procedures and sanctions that follow.

Definitions

Academic dishonesty involves acts that may subvert or compromise the integrity of the educational process at the University of Arkansas. Included is an act by which a student gains or attempts to gain an academic advantage for himself or herself or another by misrepresenting his or her or another’s work or by interfering with the completion, submission, or evaluation of work. These include, but are not limited to, accomplishing or attempting any of the following acts:

1. Altering of grades or official records.
2. Using any materials that are not authorized by the instructor for use during an examination.
3. Copying from another student’s paper during an examination.
4. Collaborating during an examination with any other person by giving or receiving information without specific permission of the instructor.
5. Stealing, buying, or otherwise obtaining information about an examination not yet administered.
6. Collaborating on laboratory work, take-home examinations, homework, or other assigned work when instructed to work independently.
7. Substituting for another person or permitting any other person to substitute for oneself to take an examination.
8. Submitting as one’s own any theme, report, term paper, essay, computer program, other written work, speech, painting, drawing, sculpture, or other art work prepared totally or in part by another.
9. Submitting, without specific permission of the instructor, work that has been previously offered for credit in another course.
10. Plagiarizing, that is, the offering as one’s own work the words, ideas, or arguments of another person without appropriate attribution by quotation, reference or footnote. Plagiarism occurs both when the words of another (in print, electronic, or any other medium) are reproduced without acknowledgement or when the ideas or arguments of another are paraphrased in such a way as to lead the reader to believe that they originated with the writer. It is the responsibility of all University students to understand the methods of proper attribution and to apply those principles in all materials submitted.
11. Sabotaging of another student’s work.
12. Falsifying or committing forgery on any University form or document.
13. Submitting altered or falsified data as experimental data from laboratory projects, survey research, or other field research.
14. Committing any willful act of dishonesty that interferes with the operation of the academic process.
15. Facilitating or aiding in any act of academic dishonesty.

Procedures

Sanctions for acts of academic dishonesty may be applied in the following ways:

A. Instructor Action

When an instructor determines or believes that a student in the instructor’s class is guilty of academic dishonesty deserving of sanction, the instructor should within five working days follow one of the following: (If the instructor is either a graduate teaching assistant or a temporary faculty member, then a supervising faculty member or the departmental head or chairman may assist in the handling of an academic dishonesty case.)
Academic Regulations

1. The instructor may determine a grade sanction and within five working days report that sanction, along with the essential details of the incident, to the judicial coordinator in Student Affairs. There is, under these circumstances, no request for administrative or judicial action. The student sanctioned in this way and instructor will be notified by Student Affairs and will have five working days from that notification to request a hearing by the All University Judiciary (AUJ) as outlined in Section 2 below. If the student does not request a hearing within five working days, then it is assumed that the sanction is not contested. The student will be required to have a conference with the judicial coordinator so that the consequences of the action can be made clear.

During the course of the hearing, the student’s participation in the affected class should continue so that any action can be reversed without prejudicing the student’s academic performance and evaluation. Should the hearing process not support the grading sanction applied by the instructor, then the instructor and student may agree and remedy the sanction with the student proceeding in the class without prejudice. If the instructor and the student cannot so agree, or if the grading sanction cannot be remedied, then the student may appeal via the Academic Appeal Structure for Undergraduate Students.

If the defense of any grade is based on alleged academic dishonesty and the faculty member has not followed the University policy, the ability of the faculty member to defend his or her action may be adversely affected.

2. The instructor may file an incident report form referring the case to the judicial process for determination of guilt or innocence and the application of sanctions. If the student is determined to be guilty of academic dishonesty, then the instructor may apply a grade sanction in addition to whatever sanctions are applied by the judicial process. While such a case is pending in the judicial process, the student’s participation in the affected class should continue to avoid pre-empting the options available after the guilt or innocence is determined. This course of action is appropriate in cases where there is doubt about guilt or innocence or in cases where the offense deserves sanctions beyond the grading system.

B. Judicial Process

If the instructor chooses to refer the case to the judicial process as outlined in A.2 or if another student, faculty member, or administrator wishes to charge a student with academic dishonesty, the following procedures will be followed:

1. Administrative Action. This would involve the application of a sanction or an admonition or some type of probation following established guidelines by the judicial coordinator after an incident has been reported by a faculty member, an administrator, or a student. Such action may be appropriate in cases where there is little or no disagreement as to the details of the reported incident. Administrative sanctions may be appealed by any party in the incident to AUJ within three working days of notification of the administrative action.

2. All-University Judiciary (AUJ). This involves application of sanctions for academic dishonesty after the case has been heard and decided by AUJ. This would be used in contested cases, cases of appeals of instructor or administrative actions, any case involving a student with a previous record of academic dishonesty or who previously received a grade sanction for academic dishonesty, and in cases where the sanction could result in suspension or expulsion from the University. The procedures involved in AUJ action are available from Academic Affairs or Student Affairs.

Any action of AUJ may be appealed within five working days through the Vice Chancellor for Academic Affairs to the Chancellor of the University. If the Chancellor discovers evidence previously unavailable to AUJ, then the Chancellor may explain in writing to the Chair of AUJ and ask that AUJ rehear the case.

Sanctions

The choice of sanctions in cases of academic dishonesty always involves consideration of the integrity of the educational process of the University. There is no place in that process for academic dishonesty, and if a student is undermining the integrity of that process, then separating that student from the University is the natural sanction. The intent of this policy is to make acts of academic dishonesty clear risks – that is, the sanctions are to be sufficiently heavy to deter academic dishonesty. Thus, the application of a grade sanction as the only sanction is to be very carefully considered and should occur only in unusual cases.

The following are possible sanctions for academic dishonesty:

1. Grading Sanctions. An instructor may apply grading sanctions. Such sanctions may also be recommended by either the judicial coordinator in case of administrative action or by AUJ, but the final decision will be that of the instructor. Grade sanctions may consist of either grades of zero or failing grades on part or all of a submitted assignment or examination, or a lowering of a course grade, or a failing grade. All grade sanctions must be appropriately reported as outlined in the procedures above. A grade sanction may be appealed by the student via the Academic Appeal Structure for Undergraduate Students.

2. Admonition or Probation. These are applied by either administrative action or AUJ action. The types:
   a. Admonition. This is a firm warning against future violations, filed in the office of the judicial coordinator.
   b. Conduct Probation. This is a probation imposed for a specified period and constitutes a final warning and a second chance to demonstrate what has been learned and to show improved judgment.
   c. Personal Probation. This is a probation imposed for a specified period and constitutes a final warning of more severe sanctions. This requires the student to meet periodically with a University official to discuss and explore alternatives to the kind of behavior that resulted in the sanction.
   d. Disciplinary Probation. This is probation imposed for a specified period and constitutes a warning that affects the student’s good standing in the University. Violations of regulations during the period are likely to result in suspension or expulsion. During the period, the student is no longer to hold campus offices, receive honors, or represent the University in extracurricular or intercollegiate activities.
   e. Educative Sanctions. These include a variety of assignments, tasks, or experiences that should make the offender more aware of the nature of the general problem of academic dishonesty. These may be applied in conjunction with any admonition or probation.

3. Suspension. Suspensions for a specified period of time from the University may be recommended by AUJ. Such suspensions may be for the remainder of a semester or for a specified number of semesters. In cases of clearly premeditated cheating or cases where either illegal actions or conspiracy with others is involved, suspension for at least the remaining part of a semester or one full semester must be considered as a sanction. Also, suspension will normally be the minimal sanction in cases where a student is guilty of academic dishonesty for a second time.

4. Expulsion. Expulsion from the University for an indefinite period of time may be recommended by AUJ.
Implementation and Review

For details of procedures for implementing this policy, contact the Office of the Vice Chancellor for Academic Affairs. This University policy does not preclude the implementation by colleges of policies determined by the Vice Chancellor to be more rigorous.

TERM PAPER ASSISTANCE

(Campus Council, March 26, 1987)

The use of services of term paper assistance companies is a violation of University policies on academic integrity. Student submission of such research or term papers to meet requirements of any class or degree program is expressly prohibited and constitutes academic dishonesty. Any violation of this prohibition will automatically result in both punitive action by the instructor (e.g., the award of a grade of “F” for the course) and a referral of each violation to the All-University Judiciary Committee for its consideration.

ATTENDANCE

Education at the university level requires active involvement in the learning process. Therefore students have the responsibility to attend classes and to actively engage in all learning assignments or opportunities provided in their classes. Instructors have the responsibility to provide a written policy on student attendance that is tied to course objectives included in a course syllabus. There may be times, however, when illness, family crisis, or University-sponsored activities make full attendance or participation impossible. In these situations students are responsible for making timely arrangements with the instructor to make up work missed. Such arrangements should be made in writing and prior to the absence when possible.

Examples of absences that should be considered excusable include those resulting from the following: 1) illness of the student, 2) serious illness or death of a member of the student’s immediate family or other family crisis, 3) University-sponsored activities for which the student’s attendance is required by virtue of scholarship or leadership/participation responsibilities, 4) religious observances (see UA Religious Observances policy below), 5) jury duty or subpoena for court appearance, and 6) military duty. The instructor has the right to require that the student provide appropriate documentation for any absence for which the student wishes to be excused.

RELIGIOUS OBSERVANCES

(Campus Faculty, November 15, 1995)

Although Christian religious holidays are reflected to some extent in the academic calendar of the University, holidays of other religious groups are not. When members of other religions seek to be excused from class for religious reasons, they are expected to provide their instructors with a schedule of religious holidays that they intend to observe, in writing, before the completion of the first week of classes. The Schedule of Classes should inform students of the University calendar of events, including class meeting and final examination dates, so that before they enroll they can take into account their calendar of religious observances. Scheduling should be done with recognition of religious observances where possible. However, faculty members are expected to allow students to make up work scheduled for dates during which they observe the holidays of their religion.

FINAL EXAMINATION POLICY

Each faculty member is required to give final examinations at times specified in the final examination schedule. Whenever circumstances make necessary a deviation from the announced schedule, clearance for such deviation must be obtained from the appropriate dean and the Provost/Vice Chancellor for Academic Affairs. (Campus Council, revised November 16, 1989)

It is the policy of the University to minimize student participation in extracurricular activities during the final examination period. No meetings, social activities, athletic events, or other extracurricular activities that require student participation will be scheduled on Dead Day or during the final examination period. Any exceptions to this policy must receive prior approval from the Provost/Vice Chancellor for Academic Affairs.

GRADES AND MARKS

Final grades for courses are “A,” “B,” “C,” “D,” and “F” (except for courses taken in the School of Architecture and the College of Agricultural Food and Life Sciences).

<table>
<thead>
<tr>
<th>Grade/Mark</th>
<th>Given For:</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Outstanding achievement, given to a relatively small number of excellent scholars</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good achievement</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average achievement</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Poor but passing work</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure, unsatisfactory work</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete course requirements</td>
<td>n/a</td>
</tr>
<tr>
<td>AU</td>
<td>Audit, officially registered</td>
<td>n/a</td>
</tr>
<tr>
<td>CR</td>
<td>Credit without grade points</td>
<td>n/a</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory work in courses w/o credit</td>
<td>n/a</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal</td>
<td>n/a</td>
</tr>
</tbody>
</table>

No credit is earned for courses in which a grade of “F” is recorded. A final grade of “F” shall be assigned to a student who is failing on the basis of work completed but who has not completed all requirements. The instructor may change an “F” so assigned to a passing grade if warranted by satisfactory completion of all requirements. Students who fail to present an acceptable reason for not having completed all course requirements including the final examination will receive the grade they would have received had they failed such requirements.

A mark of “I” may be assigned when a legitimate good cause has prevented the student from completing all course requirements, and the work completed is of passing quality. It is the discretion of the instructor that determines what qualifies as a legitimate good cause. It is recommended that the instructor, prior to the assignment of an “I” mark, document the legitimate good cause and conditions for completing course requirements. An “I” so assigned may be changed to a grade provided all course requirements have been completed within 12 weeks from the beginning of the next semester (excluding summer semesters) of the student’s enrollment after receiving the “I.” If the instructor does not report the grade within the 12-week period, the “I” shall be changed to an “F.” When a mark of “I” is changed to a final grade, the grade points and academic standing are appropriately adjusted on the student’s official academic records.

A mark of “AU” (Audit) is given to a student who officially registers in a course for audit purposes (see Registration for Audit).

A mark of “CR” (Credit) is given for a course (for example, prac-
Academic Regulations

tice teaching, certain seminars, certain honors colloquia, and courses where credit is earned by examination) for which the University allows credit toward a degree, but for which no grade points are earned.

A mark of “S” (Satisfactory) is assigned in courses such as special problems and research when a final grade is inappropriate. The mark “S” is not assigned to courses or work for which credit is given (and thus no grade points are earned for such work). If credit is awarded upon the completion of such work, a grade or mark may be assigned at that time, and, if a grade is assigned, grade points will be earned.

A mark of “W” (Withdrawal) will be given for courses from which students withdraw after the first 10 days of the semester and before the drop deadline of the semester.

“L,” “AU,” “CR,” “S,” and “W” marks will not be counted in the grade-point average. Grades of plus and minus are assigned grade-point values in the College of Agriculture (page 69) and School of Architecture (page 100). The grade-point average is computed by dividing the total number of grade points by the total number of credit hours attempted in courses for which grades (rather than marks) are given. Students who utilized grade renewal or grade forgiveness in retaking courses (prior to Fall Semester 1986 and after Fall 1996) have only the last grade used in computing grade-point averages.

UNDERGRADUATE GRADE FORGIVENESS POLICY

(Campus Council, April 11, 1996)

Under the Grade Forgiveness Policy, a student may improve the undergraduate cumulative GPA by repeating a maximum of two courses (up to nine hours) in which a grade of “D” or “F” was received and requesting that the repeat grade be the only one that is counted in the calculation. Only two such requests are available to any student in his or her undergraduate career. The repeated grade must be in the same course taken at the University of Arkansas, Fayetteville. Only a course in which a grade of “D” or “F” was earned may be repeated under the Forgiveness Policy. Grade forgiveness may not be used to replace a grade assigned as a result of academic dishonesty. The student must file a written petition to use grade forgiveness indicating which course(s) he/she chooses to grade renew: the petition must be completed and approved prior to graduation. Both attempts at the course will remain on the transcript, but only the second will be used to calculate both credit and GPA. The first attempt and the grade earned will be recorded on the transcript with the symbol “R” to denote that it has been repeated. Students considering grade forgiveness should be aware that many graduate schools, professional schools, employers or other institutions, in considering admission or employment, recompute the GPA and include all courses attempted even though a course was repeated. This means that if the cumulative GPA has been raised because of grade renewal, the recomputed GPA will be lower.

SEMESTER HONOR ROLL

The colleges of the University publish, after the close of each semester, an honor roll of the highest ranking students in the college containing the names of not more than 10 percent of the undergraduate students of each class. Students are eligible for the honor roll if they are carrying at least 12 semester hours normally required for graduation by their college for their respective year. Most colleges refer to this part of the honor roll as the Dean’s List.

In addition, a Chancellor’s List is published each semester which recognizes those undergraduate students who achieve a 4.00 grade-point average. Students must also be carrying at least 12 semester hours normally required for graduation to be eligible for the Chancellor’s List.

For honor roll eligibility, the 12 semester hours must all be in courses for which grade points are earned.

FIRST-RANKED SENIOR SCHOLARS

A first-ranked senior scholar shall be recognized at the annual Commencement of the University of Arkansas, Fayetteville. The scholar or scholars so recognized must have a cumulative grade-point average of 4.00 on all course work completed at the time selection is made, must have applied for graduation for a semester to be a member of the appropriate class and must have completed all courses required for the baccalaureate degree at the University of Arkansas, Fayetteville, or in a program of study approved by the Director of Honors or other designee in the college in which the student is enrolled. In determining the cumulative grade-point average for the purposes of such awards, grade forgiveness, is not accepted.

SENIOR SCHOLAR

Since 1941 a key has been awarded to the graduating senior from each undergraduate college who has the highest grade-point average and who has completed at least half of his or her degree work at the University of Arkansas. The keys are awarded during the Honors Banquet.

<table>
<thead>
<tr>
<th>Cumulative Hours Earned</th>
<th>GOOD ACADEMIC STANDING when cumulative GPA is</th>
<th>Placed on ACADEMIC WARNING when cumulative GPA is</th>
<th>Continued on ACADEMIC WARNING when term GPA is</th>
<th>SUSPENDED* when term GPA is</th>
<th>DISMISSED** when term GPA is</th>
<th>Continued on ACADEMIC WARNING*** when term GPA is</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16 hours</td>
<td>1.50 or higher</td>
<td>Less than 1.50</td>
<td>1.50 or higher</td>
<td>Less than 1.50</td>
<td>Less than 2.00</td>
<td>2.00 or higher</td>
</tr>
<tr>
<td>17-32 hours</td>
<td>1.60 or higher</td>
<td>Less than 1.60</td>
<td>1.60 or higher</td>
<td>Less than 1.60</td>
<td>Less than 2.00</td>
<td>2.00 or higher</td>
</tr>
<tr>
<td>33-45 hours</td>
<td>1.75 or higher</td>
<td>Less than 1.75</td>
<td>1.75 or higher</td>
<td>Less than 1.75</td>
<td>Less than 2.00</td>
<td>2.00 or higher</td>
</tr>
<tr>
<td>46-60 hours</td>
<td>1.90 or higher</td>
<td>Less than 1.90</td>
<td>1.90 or higher</td>
<td>Less than 1.90</td>
<td>Less than 2.00</td>
<td>2.00 or higher</td>
</tr>
<tr>
<td>61 hours +</td>
<td>2.00 or higher</td>
<td>Less than 2.00</td>
<td>2.00 or higher</td>
<td>Less than 2.00</td>
<td>Less than 2.00</td>
<td>2.00 or higher</td>
</tr>
</tbody>
</table>

* No student may be suspended who has not spent the prior term of enrollment on academic warning.

** No student may be dismissed who has not been suspended during a prior term of enrollment.

*** Following Suspension and Following Dismissal
ACADEMIC PROGRESS, SUSPENSION, AND DISMISSAL

(Vice Chancellor for Academic Affairs, June 8, 2000)

A student’s academic standing in the University is determined at the end of each term of enrollment (fall, spring, or summer) on the basis of the student’s cumulative and/or term grade-point average (GPA) and number of hours earned. See the chart on previous page for the required performance levels. The student’s academic standing governs his or her re-enrollment status and determines any conditions associated with re-enrollment or denial of enrollment for a subsequent term. Normally, students will be notified of their standing individually by the University shortly after the end of each term. However, this policy statement is the formal notification to all students of the conditions that determine academic standing and the consequences for each term, regardless of individual notification.

Good Standing: Upon initial admission and during a student’s first term of enrollment, except for transfer students, the student is in good standing. (The standing of a transfer student reflects the student’s prior record and the status assigned upon admission). A student remains in, or returns to, good academic standing at the end of any term when the cumulative GPA is at or above the required minimum.

Academic Warning: When a student’s cumulative GPA falls below the minimum required for good standing, the student will be put on academic warning. This status is not recorded on the student’s permanent academic record and will not appear on transcripts. A student who enrolls for a term on academic warning may take no more than 12 hours (unless more are approved by the student’s adviser and dean). To continue for one or more additional terms on academic warning, the student must earn a term GPA at or above the cumulative GPA required for good standing. The student can remain on academic warning until the cumulative GPA is at or above the required minimum for good standing unless the student becomes subject to academic suspension by failing to earn the required term GPA.

Academic Suspension: A student on academic warning who does not earn the minimum required term GPA will be suspended from full-time enrollment. No student may be suspended who has not spent the prior term of enrollment on academic warning. A student on academic suspension has two alternatives: limited enrollment or academic leave of one year from the University.

Students who choose limited enrollment may enroll for up to nine hours of on-campus or Independent Study course work (as approved by the student’s adviser and dean) and must earn at least six hours of credit with grades of C or higher in all courses taken. A student who meets these conditions may enroll for a subsequent term on academic warning following suspension.

Students who choose academic leave may apply for readmission one year after the term of the suspension. A student who does not earn credit from another institution will be readmitted on academic warning following suspension. A student who earns credit from another institution(s) during or subsequent to the year of suspension must apply to the University for admission as a transfer student and will be granted academic standing consistent with transfer admission policy and the student’s record.

Academic Warning Following Suspension: A student on academic warning following suspension may take no more than 12 hours (unless more are approved by the student’s adviser and dean) and must earn a term GPA of 2.00 or higher for each term of enrollment until the student’s cumulative GPA is at the level required for good standing. Failure to satisfy these requirements will result in dismissal.

Academic Dismissal: A student on academic suspension or academic warning following suspension who does not earn a term GPA of 2.00 or higher and satisfy all other requirements associated with his or her status will be dismissed from the University. A student who has been dismissed may be readmitted only upon action of the Academic Standards Committee. Course work taken through Independent Study while under dismissal may be submitted to the committee as evidence of academic competence. If readmitted, the student may receive degree credit for such course work.

Academic Warning Following Dismissal: A student who enrolls subsequent to an initial dismissal and following favorable action of the Academic Standards Committee is placed on academic warning following dismissal and may take no more than 12 hours (unless more are approved by the student’s adviser and dean) and must earn a term GPA of 2.00 or higher. Failure to satisfy these requirements will result in a second academic dismissal. A second dismissal is for five years, after which a student must apply for readmission to the University and may also apply for Academic Bankruptcy. Individual colleges or programs have the discretion to set academic admission and continuation standards for specific programs that are higher than University standards.

REQUIREMENTS FOR GRADUATION

University Core Requirements (See the chart above)

The University of Arkansas has adopted a “State Minimum Core” of 35 semester-credit-hours of general education courses that are required of all baccalaureate degree candidates. This is in compliance with Arkansas Act 98 of 1989 and the subsequent action of the Arkansas State Board of Higher Education. Beginning in the fall semester of 1991, all state institutions of higher education in Arkansas have a 35-hour minimum core requirement with specified hours in each of six academic areas. The University has identified those courses that meet the minimum requirement, and they are listed in the chart above.

Students should consult the requirements for specific colleges and programs when choosing courses for use in the UA University Core.

Rationale for U of A General Education Core

In order to prepare its students for lives of the highest individual quality and the greatest potential contribution to the making of a better world, the University of Arkansas has developed a comprehensive program of general education. Although the basic skills, knowledge, methodologies, and judgments derived from experience in the core area set forth here may provide the basis for a major of professional concentration, the aims of these core requirements are not career specific. Rather, the following areas are designed to develop the tools for critical thinking and effective communication, an understanding of our richly diverse human heritage, the flexibility to adapt successfully to a rapidly changing world, a capacity for lifelong learning, and an enthusiasm for creativity.

English/Communication (6 hours)

Courses offered in this area are designed to develop the ability to organize ideas and to communicate them in grammatically correct written English with clarity, precision, and syntactical maturity. Freshman English courses taken at other universities will satisfy this requirement only if they are courses in composition. Students whose ACT scores in English are 18 or below must enroll in the sequence of courses ENGL 0003, ENGL 1013, and ENGL 1023. Students whose ACT scores in English are between 19 and 27 should enroll in ENGL 1013-1023. Students with English ACT scores of 28 or above may enroll in Honors English (1013H-1023H) or regular English (1013-1023). Students with English ACT scores of 30 or above may take 1013H-1023H or elect exemption. Students electing exemption must fill out forms in the English department office. Some programs Continued on page 41...
## University Core (State Minimum Core)\(^1\)

<table>
<thead>
<tr>
<th>Areas</th>
<th>Minimum Hours</th>
<th>University Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>6</td>
<td>ENGL 1013 Composition I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENGL 1023 Composition II</td>
</tr>
<tr>
<td>Mathematics(^2)</td>
<td>3</td>
<td>MATH 1203 College Algebra</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Any higher-level mathematics course required by major</td>
</tr>
<tr>
<td>Science(^3) (Students admitted under this catalog or later are required to take corresponding lecture/lab combinations as listed.)</td>
<td>8</td>
<td>ASTR 2003/2001L Survey of the Universe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ANTH 1013/1011L Biological Anthropology/Lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 1543/1541L Principles of Biology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 1613/1611L Plant Biology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHEM 1023/1021L Basic Chem/Health Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHEM 1053/1051L Chem in Modern World</td>
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<tr>
<td></td>
<td></td>
<td>CHEM 1074/1071L Fundamentals of Chemistry</td>
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<tr>
<td></td>
<td></td>
<td>CHEM 1103/1101L University Chemistry I</td>
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<tr>
<td></td>
<td></td>
<td>CHEM 1123/1121L University Chemistry II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHEM 1213/1211L Chemistry for Majors I/Lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHEM 1223/1221L Chemistry for Majors II/Lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHEM 1113/1111L General Geology</td>
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<tr>
<td></td>
<td></td>
<td>GEOL 1133/1131L Environmental Geology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 1023/1021L Physics and Human Affairs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 1044 Phys for Architects I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 1054 Phys for Architects II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 2033/2031L College Physics II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 2054 Univ Physics I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 2074 Univ Physics II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 1603/1601L Principles of Zoology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 2213/2211L Human Physiology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 2443/2441L Human Anatomy</td>
</tr>
<tr>
<td>Fine Arts, Humanities(^4) (Select 3 hours each from two of these four categories)</td>
<td>6</td>
<td>a) Fine Arts:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ARCH 1003 Architecture Lecture</td>
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<tr>
<td></td>
<td></td>
<td>ARHS 1003 Art Lecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ARTS 1003 Art Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COMM 1003 Film Lecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DANC 1003 Basic Course in the Arts/Movement &amp; Dance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DRAM 1003 Theater Lecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HUMN 1003 Introduction to the Arts and Aesthetics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LARC 1003 The American Landscape</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MLIT 1003 Music Lecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Humanities:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHIL 2003 Intro to Philosophy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHIL 2103 Intro to Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHIL 2203 Logic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHIL 3103 Ethics and the Professions</td>
</tr>
</tbody>
</table>

| U.S. History               | 3             | HIST 2003 History of Amer. People to 1877                                       |
|                            |               | HIST 2013 History of Amer. People to 1877                                       |
|                            |               | PLSC 2003 American National Government                                          |

| Social Sciences\(^6\) (Select from at least economics two different fields of study) | 9             | AGEC 1103 Prin of Agri Microeconomics                                            |
|                                                                                     |               | AGEC 2103 Prin of Agri Macroeconomics                                            |
|                                                                                     |               | ANTH 1023 Intro to Cultural Anth                                                  |
|                                                                                     |               | ECON 2013 Prin of Macroeconomics                                                  |
|                                                                                     |               | ECON 2023 Prin of Microeconomics                                                  |
|                                                                                     |               | ECON 2143 Basic Economics: Theory & Practice                                       |
|                                                                                     |               | GEOG 1123 Human Geography                                                         |
|                                                                                     |               | GEOG 2023 Economic Geography                                                      |
|                                                                                     |               | GEOG 2103 Emerging Nations                                                       |
|                                                                                     |               | GEOG 2203 Developed Nations                                                       |
|                                                                                     |               | HESC 1403 Life Span Development                                                   |
|                                                                                     |               | HESC 2413 Family Relations                                                        |
|                                                                                     |               | HIST 1113H Honors World Civilizations                                             |
|                                                                                     |               | HIST 1123H Honors World Civilizations                                             |
|                                                                                     |               | HIST 2003 History of Amer. People to 1877?                                       |
|                                                                                     |               | HIST 2013 History of Amer. People to 1877?                                       |
|                                                                                     |               | HUMN 1114H Hnrs. Roots of Culture to 500CE                                       |
|                                                                                     |               | HUMN 2114H Hnrs. Birth of Culture, 1600-1900                                     |
|                                                                                     |               | PLSC 2003 American National Government?                                          |
|                                                                                     |               | PLSC 2013 Intro to Comparative Politics                                           |
|                                                                                     |               | PLSC 2203 State & Local Gov                                                       |
|                                                                                     |               | PSYC 2003 General Psychology                                                      |
|                                                                                     |               | RSOC 2603 Rural Sociology                                                         |
|                                                                                     |               | SOCI 2013 General Sociology                                                       |
|                                                                                     |               | SOCI 2033 Social Problems                                                         |
|                                                                                     |               | WCIV 1003 Western Civilization I                                                  |
|                                                                                     |               | WCIV 1013 Western Civilization II                                                 |

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Footnotes are on page 41.

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[^1]: University Core (State Minimum Core)

[^2]: Mathematics

[^3]: Science

[^4]: Fine Arts, Humanities

[^5]: Humanities: CLST 1003 Intro Classical Studies: Greece

[^6]: Social Sciences

[^7]: History of Amer. People to 1877
defend conclusions based on the analysis of data. These courses are scientific inquiry, including the ability to frame hypotheses and theory, and develop the skills common to algebra may be used to fulfill core requirements. depend upon each student's curriculum, but no course below college school algebra and geometry. The specific course(s) selected will pose the ability to apply mathematical techniques at the level of high our increasingly technical culture. Core mathematics courses presup-ished aesthetic and ethical sensibility. The courses are designed to develop the capacity for reflection, an appreciation of our own thought, emotion, values, culture, and aesthetics. They are designed to prepare a student for informed citizenship by illustrating the importance of science and technology to the present and future quality of life and the ethical questions raised by scientific and technolog-ical advances.

American History and Civil Government

Under Arkansas law, no undergraduate degree may be granted to any student who has not passed a college course in American history and civil government. Courses offered by the University of Arkansas, any one of which will meet this requirement, are HIST 2003 History of the American People to 1877; HIST 2013 History of the American People, 1877 to Present; and PLSC 2003 American National Government.

Arkansas Assessment of General Education (AAGE) or Rising Junior Exam

All undergraduates in Arkansas public institutions who have earned at least 45 hours of credit toward a degree are required to take the Arkansas Assessment of General Education Exam (AAGE), also known as the Rising Junior Exam. Students transferring from other Arkansas institutions who have earned 45 or more transferable hours must take the exam during the first available test cycle, unless the student has documentation that the AAGE was completed at another college or university in Arkansas. The only students who are exempt from the AAGE requirement are those transferring at least 61 degree credit hours from out-of-state or private institutions.

Students who do not meet the AAGE requirement by the last day to register for classes will have their classes canceled for that semester. Exam registration information is sent by Testing Services to students’ university e-mail addresses. For more information on the AAGE, please contact Testing Services in 714 Hotz Hall, or call 479-575-3948.

Advanced Composition

Every undergraduate student at the University of Arkansas is also required to take and pass ENGL 2003, a three-hour course in composition, unless exemption can be gained in one of the following ways: (1) by demonstrating a satisfactory writing ability on the Advanced Composition Exemption Examination, (2) by completing ENGL 2013 (Essay Writing), or (3) by achieving a grade of “A” or “B” in ENGL 1013 and a grade of “A” in ENGL 1023 in courses taken at the University of Arkansas, Fayetteville.

ENGL 2003 will not count as part of the total number of hours required for a degree in the College of Engineering or School of Architecture or the Food, Human Nutritional Hospitality curriculum in the School of Human Environmental Sciences in the College of Agricultural, Food and Life Sciences.

Students must satisfy the requirement of ENGL 1013 and ENGL 1023 and complete 30 credit hours before taking the Advanced Composition Exemption Exam. The exam must be taken before the student has acquired 96 credit hours. The English requirement applies to all transfer students regardless of non-freshman composition courses taken at other schools. Junior and senior transfer students must take the examination at the time they enter the University of Arkansas. Students not gaining exemption from ENGL 2003 must register for the course before the last semester of their senior year.

The examination will be graded in the following categories: (1)
pass, (2) fail, and (3) borderline. The students whose papers are in the third category (borderline) will be eligible to submit a second writing sample at the regularly scheduled Junior English Exemption Exam in the following semester. Students who take and do not pass the Exemption Exam must take ENGL 2003. Students who meet the Advanced Composition Requirement also will have met the writing requirement of the Rising Junior Exam (AAGE). See previous section.

**Residence**

The full senior year must be completed in residence except that a senior who has already met the minimum residency requirement will be permitted to earn not more than 12 of the last 30 hours in extension or correspondence courses or in residence at another accredited institution granting the baccalaureate degree. No more than six of these 12 hours may be correspondence courses. The minimum residence requirement is 36 weeks and 30 semester hours. Residency for the senior year is defined as a period during which the student must be enrolled in courses offered on the campus in Fayetteville. This is intended to provide adequate contact with the University and its faculty for each student who is awarded a degree. Colleges and departments have the authority to prescribe residence requirements that exceed those described here.

**Minimum Credit Hours**

All students awarded a baccalaureate degree must have a minimum of 124 credit hours. Individual programs may require additional hours.

**Minimum Grade-Point Average**

No student will be allowed to graduate if the student has “D” grades in more than 25 percent of all credit earned in this institution and presented to meet the requirements for a degree. No student will be allowed to graduate if on Academic Warning.

**Application for Graduation**

Students who plan to graduate must file an official application to do so. Applications should be filed for the term in which degree requirements will be completed. A graduation fee will be required at the time of application.

Students intending to complete requirements during the spring semester should file their applications by the priority consideration deadline published in the schedule of classes. This will help graduating students ensure they will be listed in the commencement program, considered for graduation honors, and receive priority when diplomas are mailed.

Students completing requirements during fall or summer terms must file an application by the deadlines established for those terms. A student who fails to complete the degree during the intended semester must renew the application and pay a renewal fee for the term in which the degree requirements will be completed.

**Other Graduation Requirements**

Individual colleges and schools may have special graduation requirements, in addition to degree program requirements. Consult the college or school section in this catalog for statements of additional requirements.

**Degree Program Requirements**

A student’s degree program requirements are normally those specified in the catalog for the student’s first year of enrollment. Students may choose to meet the program requirements specified in a catalog for a later year. Students may be required to meet degree program requirements incorporated into the curriculum at a level beyond that at which the student is enrolled.

Students who transfer from institutions with articulation agreements with the University may also be allowed to meet the University program requirements in effect during their first year of enrollment in those institutions, subject to the time limits described below and the availability of course work. Students who transfer to a different degree program may be required to meet the program requirements specified in the catalog for the year of entry into that program. Students who are not enrolled for a period of two years or longer may be required to reenter under program requirements in the current catalog. Students who wish to be granted a degree on the basis of requirements specified in a catalog more than seven years old may be required to petition the college or school to be allowed to do so.

Students are expected to keep themselves informed regarding program requirements and changes.

**EIGHT-SEMESTER DEGREE COMPLETION POLICY**

The University of Arkansas is committed to helping all of its students identify and achieve their educational goals. The many U of A programs of study and activities provide opportunities to students to follow varied career and learning paths and enjoy educational experiences of different kinds. Plans for degree completion are available in the Catalog of Studies, from colleges, schools, and departments, and at the University Web site. Academic advising services in each college and school assist students in making plans for their own degree completion and in carrying them out consistent with students’ abilities, circumstances, and preferences.

Beginning with the fall of 2006, a new program, the Eight-Semester Degree Completion Program (DCP), will make it possible for qualified degree-seeking freshmen to express their intention -- and assume the associated obligations -- to complete identified bachelor’s degree programs in four academic years. The list of majors and degrees designed to be completed in eight semesters and for which the DCP is available is maintained by college and school and may be accessed from the DCP Web site. The list and degree completion plans for the programs are also made available in the Catalog of Studies (the complete online catalog), through schools, colleges and departments, and at the DCP Web site. Before registering for their first semester of study, all freshmen entering the University must accept participation, decline participation, or acknowledge ineligibility for participation in the DCP by signing the Participation Document. New freshmen will be notified regarding how to view the Participation Document on-line and learn more about registering for a Degree Completion Program. A student’s participation or nonparticipation in the DCP will not affect scholarship eligibility.

Students who are admissible to the DCP and who choose to participate have the responsibility for meeting all requirements specified by the University and their degree completion plan and the responsibility for complying with the DCP policy. The University has the responsibility to provide advising support and the opportunity for students to enroll in and complete all required courses and all other University and program requirements as scheduled in the program plan within eight sequential semesters. The University will also provide students with timely notifications to the student’s official University e-mail address regarding advising, registration, and other requirement completion information.

A student may choose at any time to discontinue participation in the DCP without penalty. Students are encouraged to discuss such choices with an authorized academic adviser for the program of study. Participation and subsequent withdrawal from the DCP will not in themselves jeopardize the student’s opportunity to complete the degree program, to do so in a timely manner, or to complete another degree program or major by fulfilling program requirements.
In some circumstances it may be in a student’s best interest to decline participation or withdraw from the DCP. Examples include students who are not prepared to choose a major before enrolling for the first semester and students who feel that a full semester class load of 15 or 16 hours will be too heavy given other responsibilities. Other students may plan to study abroad for a semester in an institution where the required courses are not offered or to participate in a semester-long internship program not included in the program plan. A decision or need to work or participate in certain time-intensive curricular and extra-curricular activities such as band and intercollegiate athletics may make it impossible to schedule all program requirements in some programs. A student may be required to withdraw from the DCP as a result of illness or other personal circumstances that make it impossible to do his or her best work, continue as a full-time student, or complete requirements in the time available. There are also a number of acts and events that may or will cause the DCP agreement to be voided, and these are identified below in the section “Student acts and other events that will or may void the degree completion plan agreement.”

Requirements for Admission to the Eight-Semester Degree Completion Program (DCP):

1. Participants must begin their program of study in the fall semester as first-time, full-time freshmen and must be committed to be full-time students able to enroll in and successfully complete at least 31-36 hours each academic year.
2. Participants must have chosen a major included in the DCP, must meet all admission requirements for the chosen program of study including applicable program grade point average and other grade requirements, and must have been admitted to programs requiring formal program admission.
3. Participants must be qualified to begin enrollment in the fall semester without being required to take remedial courses in math, English, or reading or other course prerequisites to entry-level courses in the chosen program of study.

Requirements for Continuance and Completion of the Eight-Semester Degree Completion Program:

1. Students must follow exactly the degree completion plan for the chosen major and must meet all the specified requirements in their degree plan each semester unless an alternative is approved by an authorized academic adviser for their program or they have already met the requirement.
2. Students must be continuously enrolled in and successfully complete at least 31-36 semester credit hours of appropriate course work each academic year as outlined in their degree completion plan.
3. Students must make satisfactory academic progress as defined by the University and degree program and must maintain the grade point average required by the University and the program of study.
4. Students must monitor their own progress in meeting the requirements identified in their degree completion plan, consistent with the program plan.
5. Students must register for classes at the first/earliest assigned time during their designated registration period each semester for the following term. For courses required for graduation, students must accept any available course or class section that does not conflict with other required courses. Students should understand that special scheduling accommodations cannot be guaranteed for work or other activities including athletics and band.
6. Students must seek assistance from an authorized academic adviser for their chosen program of study if they are unable to identify or register for any course(s) required for that semester in their degree program. For situations in which an authorized academic adviser for the program cannot identify a required course for the student to take, the adviser must notify the department chair and dean for the student’s program of study that it has not been possible for the student to complete registration for a required course for the next semester of enrollment. Notification must be made in writing immediately following the unsuccessful attempt to register. Consistent with the terms of the degree completion program, the chairperson or dean will identify an alternate course, in writing, to fulfill graduation requirements or will provide an override to allow the student to enroll in the required course(s).
7. Students must confer with an authorized academic adviser for their program before withdrawing from a required course as such a withdrawal will void the DCP agreement.
8. Students must at all times maintain an accurate local address, e-mail address, and telephone number in official university records. Students may make changes to such information in the Student Information System Self Service component as needed and should make them immediately following any change. Students may also make changes by written notice to the Registrar.
9. Students must respond in a timely way to any official notice or message from an authorized academic adviser and to any official notice regarding registration, degree progress, financial obligations or aid, or any other university requirement.
10. Students must make timely application for all necessary financial assistance, consistent with deadlines.
11. Students must meet all University degree requirements (including formal application for graduation consistent with deadlines and requirements as established by the Registrar for the semester in which the student is scheduled for graduation).

Student Acts and Other Events That Will or May Void the Degree Completion Plan Agreement:

1. Withdrawing from (“dropping”) a required course
2. Receiving a failing grade in a required course or receiving a grade below that required by the program
3. Changing one’s major or degree program
4. Withdrawing from the University
5. Failure to meet any degree requirement(s) as specified and in the time specified
6. Unauthorized non-payment or delayed payment of any tuition or fees
7. Incurring a disciplinary action affecting the student’s enrollment
8. Failing to comply with any other requirement of the Eight-Semester Degree Completion Policy.

Appeal Process

A student may appeal the voiding of the DCP to the dean of the college or school in which the student is enrolled. The appeal pro-
cess requires that the student submit a statement of the basis for the appeal to the dean in writing within 30 days following notification of the voiding of the program, with a copy to an authorized academic adviser for the program. The dean will notify the student and the adviser of the outcome of the appeal within 60 days after receiving the statement.

**GRADUATION RATES**

In accordance with the Student Right-To-Know and Campus Security Act of 1990, the following is a summary of the institution’s six-year graduation rates:

<table>
<thead>
<tr>
<th>Fall 1998 Graduating, Bachelor, Degree-Seeking Freshmen</th>
<th>Men</th>
<th>Women</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Graduates</td>
<td>593</td>
<td>706</td>
<td>1299</td>
</tr>
<tr>
<td>Percent of Total</td>
<td>49%</td>
<td>57%</td>
<td>53%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 1998 Graduating Student Athletes Who Received Athletically Related Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Total:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>33%</td>
</tr>
<tr>
<td>60%</td>
</tr>
<tr>
<td>49%</td>
</tr>
</tbody>
</table>

**TRANSFER OF CREDIT**

The following policies control the granting of credit for course work taken at other institutions:

1. Transfer credits are subject to a two-stage evaluation process. First, the eligibility of the hours for transfer is evaluated by the Office of the Registrar based upon decisions of appropriate faculty. Credits found to be eligible for general transfer may not always count toward the minimum requirements for a degree at the University of Arkansas. The second step in the evaluation, performed by the academic dean’s office or department responsible for the program of study, determines which hours evaluated will satisfy degree program requirements.

2. Grades earned at other institutions are not calculated in the student’s grade-point average earned at the University of Arkansas.

3. General transfer credit is awarded for courses in which a grade of “C” or higher has been earned. Course work must be applicable to a baccalaureate degree; credit is not granted for course work that is remedial or technical in nature. Students can petition to have up to six hours of “D” grades transfer for degree credit to the University of Arkansas. Students must have a 2.00 GPA on a 4.00 scale to be considered, and courses must meet core or elective requirements in the student’s degree program. Courses outside the degree program and courses in the major cannot be considered for transfer. The Third Level Administrative Review Committee makes all decisions regarding “D” transfers. Petitions can be obtained from the Office of the Registrar.

4. In the case of course work taken at institutions not fully accredited by a regional accrediting agency, transfer credit may be denied altogether or may be granted provisionally subject to successful completion of specified courses at the University. Normally, credit is provisionally granted only if the institution is a candidate for regional accreditation.

5. No more than 68 semester hours of lower-division (freshmen-or sophomore-level) course work will be accepted. There is no limit placed upon the number of upper-division (junior- or senior-level) credit hours that may be awarded in general transfer, but a student must complete at least 30 hours in residence to meet graduation requirements (see Requirements for Graduation in this catalog). Please also refer to the appropriate college section of this catalog for any additional transfer policies that may be specific to your anticipated degree program.

6. The State Minimum Core (SMC): Act 98 of 1989 requires each institution of higher learning in Arkansas to identify a minimum core of general education courses that shall be fully transferable between state-supported institutions. Under guidelines from the State Board of Higher Education, the SMC consists of 35 hours distributed among the following education areas: English, U.S. history or government, mathematics, science, fine arts and humanities, and social sciences. Students transferring credit with grades of “C” or better from the approved SMC of another state-supported institution in Arkansas may expect to have all these hours applied toward their degree at the University of Arkansas. Each college at the University of Arkansas reserves the right to set additional general education or core requirements above and beyond those in a particular 35-hour SMC, however. The evaluation of transfer credit performed by the receiving college dean’s office will determine the extent to which courses transferred as part of a SMC will satisfy degree requirements.

Students should be prepared to submit course descriptions and syllabi of transfer work if there is any question concerning acceptance of credit toward a degree program. The University reserves the right to revise credit for advanced standing after the student has been in residence.

Please refer to the appropriate college or school section of this catalog for additional information concerning acceptance into specific degree programs.

**Arkansas Common Course Index System (ACCIS)**

The University of Arkansas participates in the Arkansas Common Course Index System for the purpose of facilitating the transfer of general academic courses between higher education institutions in Arkansas. It is an index of the State Minimum Core courses that are common across all Arkansas institutions. The numbering of indexed courses does not reflect any other state’s numbering system. ACCIS course numbers are noted in a footnote to the State Minimum Core courses on page 40. For more information you may contact the University of Arkansas Office of the Registrar.

**GRADUATION HONORS**

The faculty of each college will recommend for graduation with honors or with high honors those students it considers to be eligible for such distinction under its own regulations with the following general restrictions:

1. To be eligible for graduation honors a student must have completed at least one-half of his or her degree work at the University of Arkansas.

2. No student shall be eligible for graduation honors whose cumulative grade-point average is below 3.125.

3. A college should not recommend more than 10 percent of its graduating class for graduation honors except under unusual circumstances.

4. It is recommended that in determining graduation honors the faculty consider the whole of a student’s record but give greater weight to the last half of the record than to the first half.

**ADDITIONAL BACHELOR’S DEGREE**

A person with a bachelor’s degree from the University of Arkansas, or from any other institution, may not receive another bachelor’s degree without completing in residence at least 30 hours of additional, not necessarily subsequent, courses selected from the courses leading to a degree for which the person is a candidate.
More than 30 hours of course work may be required. In addition to the college or school requirements, the candidate must also meet all University requirements as stated in the catalog, including graduation and core requirements, except when course work for the first degree satisfies requirements for the second.

**ANNUAL NOTICE OF STUDENT RIGHTS UNDER THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)**

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are as follows:

1. The right to inspect and review the student’s education records, with some exceptions under the Act, within 45 days of the day the University receives a request for access. Students should submit to the Registrar’s Office written requests that identify the record(s) they wish to inspect. The appendix to University-wide Administrative Memorandum 515.1 provides a list of the types and locations of education records, the custodian of those records, and copying fees for each individual campus. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student’s education records that the student believes are inaccurate or misleading. Students should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. A sample form, which may be used in making this request, is contained in the appendix to University-wide Administrative Memorandum 515.1.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing and is also contained in the University-wide Administrative Memorandum 515.1.

3. The right to withhold consent of disclosure of directory information, defined as the following information: the student’s name; address; telephone number; date and place of birth; religious preference; major field of study; classification by year; number of hours in which enrolled and number completed; parents’ or spouse’s 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 education agency or institution attended; and photograph.

   This information will be subject to public disclosure unless the student informs the Registrar’s Office in writing each semester that he or she does not want his information designated as directory information. To prevent publication of name in the printed student directory, written notice must reach the Registrar’s Office by August 31 of the fall semester.

4. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent.

   One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an educational record to fulfill his or her professional responsibility.

   Upon request, the University also discloses education records without consent to officials for another school in which a student seeks or intends to enroll.

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is as follows:

   Family Policy Compliance Office
   U.S. Department of Education
   400 Maryland Avenue, SW
   Washington DC 20202-4605

6. University-wide Administrative Memorandum 515.1 is available on request in the main library on campus.

**PHOTOGRAPHIC AND VIDEO IMAGES**

The University is proud to publish and display photographic and video images of UA students, their activities and accomplishments. Any student who does not wish to be represented in such photographic and video images by the University should choose to withhold photos on the FERPA option on the University’s student information system.

**WAIVER OF ACADEMIC POLICIES**

The Academic Standards Committee, composed of faculty and students, serves as a referral body for matters of probation, suspension, dismissal, and other rules and regulations related to academic progress and graduation. Petitions for waiver of academic rules and information on the petitioning process may be obtained at the offices of the academic deans or the Registrar. Petitioners should note petitioning deadlines.

**STUDENT ACADEMIC APPEALS AND COMPLAINTS**

Students are first encouraged to resolve academic conflicts and complaints informally through their department or through the assistance of the Office of Student Mediation and Conflict Resolution, which can provide objective and confidential mediation. If an informal resolution cannot be reached there are two kinds of procedures for undergraduate students to pursue with complaints of an academic nature. Refer to the Student Handbook for appeals structures for other grievances.

**Grade Appeal Structure for Undergraduate Students**

If a student questions the fairness or accuracy of a grade, there is recourse through a student grade appeal structure. Disagreements shall be heard that allege the instructor’s policy was not applied consistently to all students, differed substantially from the announced policy, or that a policy was not announced. All grievances concerning course grades must be filed within one calendar year of the end of the term in which the grade that is being appealed was assigned. The procedures are:
1. The student should first discuss the matter with the instructor involved, doing so as soon as possible after receiving the grade. The instructor should be willing to listen, to provide explanation, and to be receptive to changing the grade if the student provides convincing argument for doing so. The student’s questions may be answered satisfactorily during this discussion.

2. If the student chooses to pursue the grievance, the student shall take the appeal in written form to the appropriate department chairperson. That person, if she or he believes the complaint may have merit, will discuss it with the instructor.

3. If the matter remains unresolved, it will be referred to an ad hoc committee composed of the entire faculty of the instructor’s department. The committee will examine available written information on the dispute, will be available for meetings with the student and with the instructor, and will meet with others as it sees fit.

4. If the faculty committee, through its inquiries and deliberations, determines that the grade should be changed, it will request that the instructor make the change and provide the instructor with a written explanation. Should the instructor decline, he or she must provide an explanation for refusing.

5. If the faculty committee, after considering the instructor’s explanation, concludes it would be unjust to allow the original grade to stand, it may then recommend to the department chairperson that the grade be changed. That individual will provide the instructor with a copy of the recommendation and will ask the instructor to implement it. If the instructor continues to decline, the chairperson is then obligated to change the grade, notifying the instructor and the student of this action. Only the chairperson has the authority to effect a grade change over the objection of the instructor who assigned the original grade, and only after the foregoing procedures have been followed. If the faculty committee determines that the grade should not be changed, it should communicate this conclusion to the student, the faculty member, and the chair.

**Student Complaint Procedure**

This procedure is designed to give all students a means by which an academically related complaint against an instructor other than that which is solely concerned with a grade (covered by the previous section) may be reviewed and acted upon in such a way as to protect the rights of both the student and the instructor. The procedure must be initiated within one calendar year of the occurrence of the cause for the complaint.

**Guidelines:** All committee discussions or hearings shall be private. Furthermore, every effort shall make to protect any person against discrimination as a result of statements or actions made in this procedure, but fraudulent or intentionally deceptive statements and/or allegations shall be considered an extremely serious violation of the procedures and could result in a recommendation for grave disciplinary measures. Nothing in this procedure may violate policies stated under “Appointments, Promotions, Tenure, Non-reappointment, and Dismissals” in the Faculty Handbook.

**Definitions of Terms:**

- **Student** – Under this procedure, a student is any person who has been formally admitted to the University of Arkansas and who is or was enrolled as an undergraduate student at the time the alleged grievance occurred. (A separate procedure exists for graduate students.)
- **Decision** – A decision will include a review of the issues, a determination about the validity of the complaint, the reasons for the determination, and any recommendations. A decision will be stated in writing. **Working Days** – Working days refers to Monday through Friday, excluding official University holidays.

**Procedures:** The normal course for a student or a group of students with an academically related complaint concerning an instructor is to go first to that instructor, although the student or group may appeal to the instructor’s chairperson, supervisor, or dean in an attempt to resolve the problem informally and amicably. However, if a student has a complaint regarding academic concerns not covered under the “Academic Appeal Structure” and, for whatever reason, does not wish or is unable to resolve the issue informally, the student is entitled to have the issue considered under the following normal procedures.

1. The student will submit a written complaint with supporting information to the Vice Chair of the Campus Council or to the Chair of the Student Panel or to the Chair of the Faculty Panel (as described in item 4 below). These three persons will comprise a Contact Committee, with the Vice Chair of the Campus Council as coordinator, and will be responsible for the initial review of the student’s complaint. If the Contact Committee, without any preliminary investigation, agrees unanimously that a particular complaint is not subject to these procedures or should not be pursued, the student will be notified in writing. No further action will be taken under these procedures unless the student files within five working days a written request for a preliminary investigation by the Contact Committee or for an investigation by a Hearing Committee; this request will be honored, and the instructor shall be informed immediately about the filing of the complaint, the nature of the complaint, and the initiation of the investigation. Deliberate and cautious discretion will be used to preserve a student’s anonymity (if possible, depending upon the nature of the complaint) and to protect the faculty member from presumptive suspicion.

2. If, through lack of unanimous agreement or as a result of the student’s request, the Contact Committee pursues the complaint, the Committee will initiate the preliminary investigation. The preliminary investigation should be completed within 15 working days, if possible, from the date the request is received. After the investigation, the Contact Committee has a choice of two alternatives:
   a. It will make a determination regarding the complaint and will notify in writing both parties; or
   b. It will determine that a Hearing Committee should be appointed and that a more thorough investigation should be conducted. Both parties will be advised of this determination and of who has been appointed to serve on the Hearing Committee.

3. If the Contact Committee has made a determination regarding resolution of the complaint and if either party is not satisfied with this determination, that party has a prerogative of requesting and having a Hearing Committee appointed to investigate the matter further.

4. Members of a Hearing Committee will be selected from two panels of 15 persons each: one of students, chosen by ASG; and one of faculty members, chosen by the Faculty Committee on Committees. The Chair of the Student Panel will be selected by the ASG President, and the Chair of the Faculty Panel will be selected by the Chair of the Campus Faculty.

5. When an investigation by a Hearing Committee becomes necessary, the Committee will be appointed immediately by the Contact Committee. The Hearing Committee will be composed of three students and of four faculty members, chosen to avoid obvious bias or partiality. The coordinator of the Contact Committee will call the initial meeting of the Hearing Committee to conduct an election of a chairperson from among the four faculty members and to review general information and results of any preliminary investigation.

6. Either party to the dispute may ask another member of the University community to attend the hearings and may ask any
member of the University community to provide relevant information. At the end of its investigation, which, if possible, should be completed within 20 working days after its first meeting, the Hearing Committee will submit its decision to both parties.

7. If the decision is not acceptable to either the student or the instructor, that person may appeal in writing to the Provost of the University. The Provost will review the Hearing Committee’s written report and will forward a written recommendation to the student, the instructor, and the Chairperson of the Hearing Committee.

ADVANCED-STANDING PROGRAMS

Credit by Examination

There are two ways a student enrolled at the University of Arkansas, Fayetteville, may establish undergraduate credit by examination in courses offered by the University: either through the University of Arkansas Credit by Examination Program (see the next section), or through approved national testing programs, such as the College Level Examination Program (CLEP), the Advanced Placement Program (AP), or the International Baccalaureate Program (IB). The faculty of each department is responsible for designating the courses in that department that may be challenged by examination. Credit established by examination must be evaluated in terms of the specific program the student wishes to pursue. The decision regarding the appropriate application of such credit to a degree program will be made in each college or school. Credit established by examination will be applied to a degree program in the same manner as credit established in any other way. If credit is earned by examination, the mark of CR will be entered in the student’s record. Grades are not assigned.

<table>
<thead>
<tr>
<th>CLEP Examination</th>
<th>UA Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Examinations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Mathematics</td>
<td>MATH 0003</td>
<td>520</td>
<td>52</td>
</tr>
<tr>
<td>English Composition¹</td>
<td>ENGL 1013</td>
<td>490</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>ENGL 1013 &amp; ENGL 1023</td>
<td>540</td>
<td>65</td>
</tr>
<tr>
<td>Approved Subject Examinations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Government</td>
<td>PLSC 2003</td>
<td>47</td>
<td>50</td>
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<tr>
<td>Biology</td>
<td>BIOL 1543/1541L</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>Calculus</td>
<td>MATH 2554</td>
<td>55</td>
<td>650</td>
</tr>
<tr>
<td>College Algebra</td>
<td>MATH 1203</td>
<td>50</td>
<td>54</td>
</tr>
<tr>
<td>College Algebra – Trigonometry</td>
<td>MATH 1285</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>Freshman College Composition²</td>
<td>ENGL 1013</td>
<td>52 + acceptable essay</td>
<td>57 + acceptable essay</td>
</tr>
<tr>
<td></td>
<td>ENGL 1013 &amp; ENGL 1023</td>
<td>62 + acceptable essay</td>
<td>66 + acceptable essay</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CHEM 1103/1101L &amp; CHEM 1123/1121L</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>History of United States I</td>
<td>HIST 2003</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>History of United States II</td>
<td>HIST 2013</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Human Growth &amp; Development</td>
<td>HESC 1403</td>
<td>63</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Educational Psychology</td>
<td>PSYC 4033</td>
<td>55</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>PSYC 2003</td>
<td>47</td>
<td>55</td>
</tr>
<tr>
<td>Introductory Sociology</td>
<td>SOCI 2013</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Principles of Macroeconomics</td>
<td>ECON 2013</td>
<td>48</td>
<td>54</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>ECON 2023</td>
<td>48</td>
<td>54</td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td>MKTG 3433</td>
<td>48</td>
<td>50</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>MATH 1213</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Western Civilization I</td>
<td>WCVI 1003</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Western Civilization II</td>
<td>WCVI 1013</td>
<td>50</td>
<td>60</td>
</tr>
</tbody>
</table>

¹ The University accepts both the 90-minute multiple-choice test and the 90-minute test, which includes a 45-minute multiple-choice section and a 45-minute essay section.

² Essay required. Numerical scores by themselves will not suffice for credit, nor will they guarantee credit.
In certain instances, however, instead of actually receiving credit in semester hours, a student may receive advanced standing and be authorized to enroll for advanced courses in the subject matter area. Credit by examination may not be used to satisfy minimum residency requirements as established by each college or school. Credit by examination is recorded only for students currently enrolled at the University of Arkansas, Fayetteville.

University of Arkansas Program

The following conditions apply to the departmental programs for credit by examination:

1. The student must apply for such examination using forms available in the office of the registrar or the academic dean. Permission to take the examination must be obtained from the faculty of the department offering the course.
2. The appropriate department or college offering the course will designate and administer the examination.
3. A passing grade on the examination must be “B” or above. A second trial for credit by examination in that course will not be permitted.
4. A $25 credit by examination fee will be assessed per course.

National Testing Programs

When credit by a national examination is granted, the student’s academic record will list the score used as a basis for credit as well as the type of examination used to establish credit, such as CLEP subject examination or general examination, AP examination or IB examination.

Credit is awarded on the basis of official score reports, which must be sent by the national testing service directly to the Office of the Registrar, 146 Silas H. Hunt Hall, University of Arkansas, Fayetteville, AR 72701. Credit also may be awarded on the basis of scores posted on an official university or college transcript, provided the type of examination is included. In all cases, minimum score requirements as established by the University of Arkansas, Fayetteville, must be met.

Approval has been granted to award credit for the following national testing programs:

College Level Examination Program (CLEP) – see page 47

The University of Arkansas is a CLEP testing center and is authorized to administer CLEP examinations both on a national basis and on an institutional basis. However, CLEP examinations may be taken at scheduled times at any national test center, and the results sent to the University of Arkansas. The test center code number and score recipient code number for the University of Arkansas is 6866. For information or to make application, write Testing Services, 713 Hotz Hall, University of Arkansas, Fayetteville, AR 72701, or telephone 479-575-3948.

Approval has been granted by appropriate governing body, upon recommendation of the academic department, to award credit in the following courses by the use of CLEP examinations. Minimum scores for the paper-based version and the new computer-based version were established by the departments of the subject areas concerned.

Please note that minimum scores for credit for computer-based CLEP exams may differ from paper-based CLEP examinations.

Advanced Placement Program (AP) – see courses on page 49

The Advanced Placement (AP) Program of the College Entrance Examination Board gives students the opportunity to pursue college-level studies while still in high school and, with an appropriate score on an AP exam, to receive advanced placement and/or credit upon entering the University. The AP examinations are offered annually by high schools that participate in this program. The appropriate UA governing body, upon recommendation of the academic department, has authorized credit and/or placement for students who present qualifying scores in the AP courses listed on page 49.

International Baccalaureate Program (IB)

The International Baccalaureate (IB) program is a comprehensive and rigorous two-year high school curriculum offered in the United States and in 72 countries around the world. The IB program provides students with a balanced education, facilitates geographic and cultural mobility, and promotes international understanding through a shared academic experience. The IB program gives students the opportunity to pursue college-level studies while in upper secondary school and to receive credit for final examinations upon entering the University.

The IB examinations are offered annually, usually in May, by high schools participating in this program. Students seeking credit for examinations must request that a final, official IB transcript of certificate or diploma results be sent by mail to the UA Office of the Registrar. These materials may be requested from International Baccalaureate North America, 200 Madison Avenue, Suite 2007, New York, NY 10016, telephone: 212-696-4464.

Approval has been granted by appropriate academic departments to award credit in the following courses. The minimum scores were established by the departments of the subject areas concerned.

<table>
<thead>
<tr>
<th>INTERNATIONAL BACCALAUREATE (IB)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>International Course</strong></td>
</tr>
<tr>
<td>Chemistry</td>
</tr>
<tr>
<td>Economics</td>
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<tr>
<td>English</td>
</tr>
<tr>
<td>Geography</td>
</tr>
<tr>
<td>Mathematics¹</td>
</tr>
<tr>
<td>Philosophy</td>
</tr>
<tr>
<td>Physics</td>
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¹ May qualify for up to 8 hours of credit and/or placement in higher-level courses as determined by the Department of Mathematics.
# ADVANCED PLACEMENT PROGRAM (AP)

<table>
<thead>
<tr>
<th>AP Examination</th>
<th>UA Course</th>
<th>Minimum Score</th>
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<tbody>
<tr>
<td>Art History</td>
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<td>4C</td>
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Symbols for placement and credit: P = placement; Pq = qualified placement (student may be placed in an advanced course, with credit awarded for prerequisite courses upon satisfactory completion, subject to departmental review.); C = credit; Cq = qualified credit (placement and credit subject to departmental review).

1 Credit will be awarded upon satisfactory completion of a junior or senior-level economic course.
2 Students must pass a departmental test to receive credit.
3 To receive credit for courses preceding the course for which AP credit has been granted, students must enroll in and complete with a grade of “C” or higher, that course which follows in sequence the course for which AP credit was granted.
4 At most, 3 hours credit allowed for AP Statistics.
Academic Facilities and Resources

UNIVERSITY LIBRARIES

The library system of the University of Arkansas, Fayetteville, is composed of the David W. Mullins Library (the main research facility on campus) and three branch libraries: the Robert A. and Vivian Young Law Library, the Fine Arts Library, and the Chemistry and Physics Libraries, which are housed together temporarily during renovations of the chemistry building. The combined holdings of the libraries total more than 1.7 million volumes of books and bound periodicals and over five million items in microform. The Libraries currently receive more than 18,000 separate journal and serial publications. Other resources in the collections include more than 20,000 audio and visual materials, and several thousand maps, electronic databases (indexes and full text), and manuscripts.

The University Libraries maintain membership in the Greater Western Library Alliance, the Center for Research Libraries, the Coalition for Networked Information, Amigos Library Services, and the state consortium ARKLink. Through OCLC, the libraries share cataloging and interlibrary loan information with thousands of libraries all over the world. The University Libraries’ holdings are cataloged in the InfoLinks system. Currently enrolled students, faculty and staff can access more than 200 reference databases, thousands of electronic journals, and InfoLinks from any computer with an Internet connection via the Libraries’ Web page, available through the University home page or directly at http://libinfo.uark.edu.

The public may use materials, services and resources of the University Libraries on-site. Currently enrolled students, appointed faculty and staff, and approved borrowers with a valid University ID card may check out materials through the libraries’ convenient electronic checkout system. The “view your own record” feature of this system allows patrons to check their library records, including the status of checked out items. Materials may be renewed and requested for hold through the automated system. Loan periods vary according to the type of material and circulation policies of the department or branch library, which can be found at the main Access Services Desk or through the library home page. Items not owned by the University Libraries may be obtained through interlibrary loan by completing the online registration and request forms. Requested items in electronic format will be sent directly to desktops; physical items will be held for pick-up at the Access Services Desk.

The Reference Department assists users in locating and using library resources. Reference librarians are ready to help students navigate InfoLinks and the numerous electronic databases. In addition, librarians offer orientation sessions and lectures on research methods to classes and groups upon request, and research consultations to individuals by appointment.

The University Libraries have had official United States government depository status since 1907. The Federal Depository Library Program provides free public access to U.S. government information by distributing information products from Federal agencies to depository libraries throughout the nation. Titles are distributed in paper, microfiche, or electronic formats (Internet, CD-ROM, DVD) and are arranged according to the Superintendent of Documents classification numbering system (SuDoc). The Government Documents Department has also been a depository for Arkansas state publications since 1993. The Department manages the University Libraries’ maps collection and GIS (Geographic Information Systems) program, including a public GIS workstation equipped with ArcGIS Desktop Suite.

The Libraries’ Special Collections Department acquires and preserves material for research in the history, literature and culture of Arkansas and surrounding regions. Researchers have access to a rich assortment of books, pamphlets, periodicals, photographs, maps and original manuscript collections to support their work.

For information concerning collections and services, as well as information on reserve reading policies, computer laptop loans for in-house use, and group study rooms, please inquire at (479) 575-4104. For inquiries regarding seminar rooms, gifts and donations, or any other library matter, please contact the Dean’s Office at (479) 575-6702.

QUALITY WRITING CENTER

The Quality Writing Center, established in 1984, provides an array of services to the University of Arkansas community. The center’s primary focus is one-on-one tutorials with students, faculty, and staff who want to improve their writing in projects such as freshman essays, technical reports, research papers, theses and dissertations, or articles for publication. In addition to face-to-face tutorials, consultants offer online tutorials at http://www.uark.edu/write/.

QWC faculty and graduate tutors work with writers on various matters, including brainstorming, organization, transitions, style formats, revision and editing strategies, usage, grammar, and punctuation. During these sessions, consultants ask and answer questions, give reader responses, and help writers take charge of their writing.

The center also assists faculty in planning and evaluating writing assignments and provides clients with assignments, models, articles, and books for them to consult. In addition, center faculty collaborate with classroom faculty in workshops on writing. Besides working with faculty and the general student body, the center also helps students for whom English is a second language (ESL); books and handouts are available to review standard English, and the consul-
tants explain the subtleties of writing assignments to the clients. The center also provides help to non-traditional students who may need to review writing and grammar skills and who may need personalized help to regain confidence in writing. For students writing editorials, petitions, resumes, job applications, or essays for scholarships and medical or graduate schools, the center offers tutorials and provides resource books.

To assist in the writing process, the center has a computer lab where writers may research the Internet, access library resources, write, and easily revise their work after tutorials. Patrons may visit our centers in Kimpel Hall and in the Enhanced Learning Center or access our online services and writing resources at http://www.uark.edu/write/.

COMPUTING FACILITIES AND RESOURCES

The department of Computing Services supports research, academic and administrative computing activity on the UA campus. Computer operations are maintained to provide access to computing facilities and resources 24 hours a day, seven days a week.

A variety of host systems and servers are available for academic use. The primary mail and messaging server on campus is mail.uark.edu. E-mail is browser-based and can be checked from any computer with an Internet connection by going to http://mail.uark.edu/. In addition, users can choose to use e-mail clients such as Outlook or Eudora, both of which are supported. The primary server for academic and research computing is comp.uark.edu, a Sun Enterprise 6500, using the Unix operating system Solaris. Comp supports statistical packages (SAS, SPSS, MATLAB), programming languages (C, C++, FORTRAN, Pascal), e-mail software (Pine), and other Internet applications. Personal home pages may also be developed on the comp server. All students are automatically assigned accounts on mail.uark.edu and comp.uark.edu, and Active Directory, which allows students, staff, and faculty access to computers in the General Access Computing Labs.

A variety of other servers provide support for both administrative and academic computing. These include an IBM 9672 Model RB5 mainframe for administrative computing for campus student information, human resources, and business processing systems; data warehousing; Web services; and file and print services, among others. Some departments participate in Computing Services’ Intel-based file services, allowing them access to PC- and Mac-based software through these servers. Additionally, the General Access Computer Labs maintain software via networked servers, allowing access to the same products in multiple labs. Faculty may also access the administrative computing systems for advising purposes, roster generation, and grade reporting. Host peripherals include disk storage, tape systems, and laser printing.

UARKnet, the campus backbone network, is managed by Computing Services. This network enables communication among networks, computers, and servers on campus, as well as on the Internet and Internet2, of which the University is a member site. Virtually all departments, as well as all laboratories, are connected to the campus network. Network access is also available via dial-up modem connections. Dial-up access requires an ID and password, and students have access to a “student only” pool.

The General Access Computer Labs offer approximately 300 network-attached PC and Mac computers for use by University students, faculty, and staff. These labs are located in the Arkansas Union, Administrative Services Building, Sam Walton College of Business Building, Mullins Library, and the Enhanced Learning Center located in Gregson Hall. The labs offer day, evening, and weekend hours. In addition to being Internet-connected, a variety of products are installed on these machines, including Internet browsers (Netscape and Internet Explorer), word processors (MS Word and WordPerfect), databases (MS Access), and spreadsheet programs (MS Excel). Laser printing is available from all supported software. Scanning facilities are available in the Administrative Services Building and the Arkansas Union labs, and color printing is available in the Union.

Laptops are available for checkout in Mullins Library and at the Student Technology Center, located in the Arkansas Union. These laptops can be used standalone or with network access via the wireless network in Mullins and the Union. Personal laptops may also connect to the network through public drops located in Mullins and the Union, as well as through the campus wireless network.

Computing Services offers free, non-credit training courses every month on a variety of computer and Internet-based topics, including operating systems, e-mail, word processing, Web page development, presentation tools, and many others. Students can also ask any technology-related question and receive help by going online to askit.uark.edu, the University’s new warehouse of searchable IT information for all students, faculty and staff.

The Student Technology Center, provided by the Student Technology Fee and Computing Services, is a walk-in computing help center offering laptops and projectors for checkout, as well as high-end multimedia direction and assistance. Laptops are configured for wireless Internet access, and carrels are available with desktop computers. Laptops and desktops are loaded with advanced, multimedia software for layout, graphics design, and Web site development, which students can learn to use with assistance from staff at the STC.

The MultiMedia Resource Center (MMRC) provides access to and training for computers and applications that can be used to develop programs and classroom presentations. In addition, the MMRC features a training lab, including Internet-connected computers equipped for video conferencing and distance education applications. The MMRC also has presentation equipment and a portable IP-based video conferencing unit available for checkout. The Research Data Center provides researchers with assistance in data design and analysis and with support for other needs, such as training and access to numeric data and assistance in using Web-based data.

Computing Services is located in the Administrative Services Building (ADSB) at 155 Razorback Road. Computing Services specialists offer assistance with operating systems, application programs, virus scanning, modem communications, Internet tools, research projects, general troubleshooting, and more. For more information, call the Computing Services Help Desk at 479-575-2905, from 7 a.m. to 6 p.m. Monday-Thursday and until 5 p.m. Friday, or visit the Computing Services Web site at http://compserv.uark.edu/.

TESTING SERVICES

Testing Services is charged with the responsibility of administering standardized academic tests at the University of Arkansas. The office administers such national tests as the Medical College Admission Test (MCAT), the ACT Assessment, the Law School Admission Test (LSAT), the Graduate Management Admission Test (GMAT), the Graduate Record Examination (GRE), and CLEP exams in addition to others throughout the year. National testing companies determine testing dates and deadlines. Testing Services also offers a number of institutional tests such as the Test of English as a Foreign Language (TOEFL), the Spoken Language Proficiency Test (SLPT), and the Math Placement Test. These tests are scheduled at various times as demand dictates. Test fees vary depending on the test.

To obtain a registration bulletin or information about exam dates and deadlines, please stop by 714 Hotz Hall or call 479-575-3948.
Research programs are the means by which the University contributes to the generation as well as to the preservation and dissemination of knowledge. With nationally recognized programs in many areas and funding from government, industry, and other private sources, the research effort of the University is strong and diversified. Among the many advantages of attending the University of Arkansas is the accessibility of faculty members and their enthusiasm for including undergraduates in the research process. Such collaboration can enhance students' educational experiences by providing practical training in research and lab techniques, by engaging students in the subject or process they're studying, and by fostering a mentoring relationship between faculty and student researchers. It is not uncommon for students to contribute significant and meaningful insights to their field of study through the research process.

The University encourages all undergraduates to pursue research in their areas of academic interest. Students who wish to engage in research of any kind should seek the guidance of their advisers and professors to identify research teams and projects. In addition to the extensive work performed by faculty through individual and team efforts in academic departments, special programs of research are conducted by faculty members and staff in many associated University divisions. The University invites students to learn more about these divisions and the research opportunities they offer by visiting the Web sites or by contacting the individuals listed below.

**University Centers and Research Units**

<table>
<thead>
<tr>
<th>AGRICULTURAL EXPERIMENT STATION</th>
<th>ARKANSAS CENTER FOR SPACE AND PLANETARY SCIENCES</th>
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<tr>
<td>Richard A. Roeder, associate director</td>
<td>Derek Sears, director</td>
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<tr>
<td>AFLS E108</td>
<td>MUSE 202</td>
</tr>
<tr>
<td>479-575-4446</td>
<td>479-575-7625</td>
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<td><a href="mailto:csaps@uark.edu">csaps@uark.edu</a></td>
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<td><a href="http://www.uark.edu/depts/awrc/">http://www.uark.edu/depts/awrc/</a></td>
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<tr>
<td>Thomas Green, director</td>
<td>Ralph K. Davis, director</td>
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<tr>
<td>ARAS 147</td>
<td>OZAR 112</td>
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<td>479-575-3556</td>
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<td><a href="mailto:awrc@uark.edu">awrc@uark.edu</a></td>
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<tr>
<td>David Kremantz, unit leader</td>
<td>Rita Littrell, director</td>
</tr>
<tr>
<td>SCEN 632</td>
<td>RCED 205</td>
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<tr>
<td>479-575-6709</td>
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<td><a href="http://www.cast.uark.edu/">http://www.cast.uark.edu/</a></td>
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<tr>
<td>Beverly Elliott, director</td>
<td>Fred Limp, director</td>
</tr>
<tr>
<td>WAAAX 300</td>
<td>OZAR 12</td>
</tr>
<tr>
<td>479-575-3030</td>
<td>479-575-6159</td>
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<tr>
<td></td>
<td><a href="mailto:info@cast.uark.edu">info@cast.uark.edu</a></td>
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<tr>
<td>CENTER FOR ARKANSAS AND REGIONAL STUDIES</td>
<td>CENTER FOR RETAILING EXCELLENCE</td>
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<tr>
<td>Robert Cochran, director</td>
<td>Claudia B. Mobley, director</td>
</tr>
<tr>
<td>MAIN 506</td>
<td>WCOB 246F</td>
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<td>479-575-7708</td>
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<td><a href="http://www.cspin.net/">http://www.cspin.net/</a></td>
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<tr>
<td>Jeffery T. Collins, director</td>
<td>Greg Salamo, co-director</td>
</tr>
<tr>
<td>RCED 217</td>
<td>PHYS 226</td>
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<tr>
<td>479-575-4151</td>
<td>479-575-5931</td>
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<tr>
<td><a href="mailto:cberinfo@cavern.uark.edu">cberinfo@cavern.uark.edu</a>.</td>
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<th>CENTER FOR SENSING TECHNOLOGY AND RESEARCH</th>
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<td>Robert H. Wicks, director</td>
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</tr>
<tr>
<td>KIMP 417</td>
<td>Charles Wilkins, director</td>
</tr>
<tr>
<td>479-575-3046</td>
<td>F19 Phoenix House</td>
</tr>
<tr>
<td><a href="mailto:twicks@uark.edu">twicks@uark.edu</a></td>
<td>479-575-5198</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:cstar@uark.edu">cstar@uark.edu</a></td>
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<tr>
<th>CENTER FOR ENGINEERING LOGISTICS AND DISTRIBUTION</th>
<th>CENTER FOR SOCIAL RESEARCH</th>
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<tr>
<td>John R. English, executive director</td>
<td>William Schwab, director</td>
</tr>
<tr>
<td>BELL 4207</td>
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<tr>
<td>479-575-2124</td>
<td>479-575-3206</td>
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<tr>
<td></td>
<td><a href="mailto:bschwab@uark.edu">bschwab@uark.edu</a></td>
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<tr>
<td><a href="http://cmed.uark.edu/">http://cmed.uark.edu/</a></td>
<td><a href="http://plsc.uark.edu/csr/">http://plsc.uark.edu/csr/</a></td>
</tr>
<tr>
<td>RCED 210</td>
<td>Brinck Kerr, director</td>
</tr>
<tr>
<td>479-575-2856</td>
<td>MAIN 428</td>
</tr>
<tr>
<td><a href="mailto:cmed@walton.uark.edu">cmed@walton.uark.edu</a></td>
<td>479-575-3356</td>
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<th>CENTER OF EXCELLENCE FOR POULTRY SCIENCE</th>
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<tr>
<td>OZAR 106</td>
<td>Walter Bottje, director</td>
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<tr>
<td>479-575-3875</td>
<td>POSC 114</td>
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<td>Frank Millett and Roger Koeppel, co-directors</td>
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<tr>
<td>479-575-4601</td>
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<tr>
<td><strong>DEPARTMENT OF REHABILITATION EDUCATION AND RESEARCH</strong></td>
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<tr>
<td><a href="http://rhrc.uark.edu/1794.htm">http://rhrc.uark.edu/1794.htm</a></td>
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<td>Brent T. Williams, coordinator</td>
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<td>GRAD 100</td>
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<tr>
<td><a href="http://www.rcep6.org/">http://www.rcep6.org/</a></td>
</tr>
<tr>
<td>Jeanne Miller, director</td>
</tr>
<tr>
<td>PO Box 1358, Building 35</td>
</tr>
<tr>
<td>Hot Spring, AR 71902</td>
</tr>
<tr>
<td>501-623-7700</td>
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<td><a href="http://www.uark.edu/depts/rehabres/">http://www.uark.edu/depts/rehabres/</a></td>
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<tr>
<td>Douglas Watson, project director</td>
</tr>
<tr>
<td>4601 W. Markham</td>
</tr>
<tr>
<td>Little Rock, AR 72205</td>
</tr>
<tr>
<td>501-686-9691 (v/tty)</td>
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<th><strong>DIANE D. BLAIR CENTER OF SOUTHERN POLITICS AND SOCIETY</strong></th>
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<td><a href="http://www.uark.edu/ua/tshield">http://www.uark.edu/ua/tshield</a></td>
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<tr>
<td>Todd Shields, director</td>
</tr>
<tr>
<td>MAIN 428</td>
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<tr>
<td>Kevin Fitzpatrick, Director</td>
</tr>
<tr>
<td>The Jones Center for Families, Springdale, AR 72765</td>
</tr>
<tr>
<td>479-575-3206 <a href="mailto:family@cavern.uark.edu">family@cavern.uark.edu</a></td>
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<tr>
<td><a href="http://www.uark.edu/~fiir/">http://www.uark.edu/~fiir/</a></td>
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<tr>
<td>Donald R. Kelley, director</td>
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<th><strong>GARRISON FINANCIAL INSTITUTE</strong></th>
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<tbody>
<tr>
<td>Wayne Lee, director</td>
</tr>
<tr>
<td>WCOB 302</td>
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<tr>
<td><a href="http://www.garvangardens.org/">http://www.garvangardens.org/</a></td>
</tr>
<tr>
<td>Bob Byers, Garden Director</td>
</tr>
<tr>
<td>550 Arkridge Road, PO Box 22240</td>
</tr>
<tr>
<td>Hot Springs National Park, AR 71903 <a href="mailto:info@garvangardens.org">info@garvangardens.org</a></td>
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<tr>
<td>Marie Parker, director</td>
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<tr>
<td>WAAX 311</td>
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<tr>
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<td>HPER 326A</td>
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<td><a href="http://www.hidec.engr.uark.edu/">http://www.hidec.engr.uark.edu/</a></td>
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<tr>
<td>Vijay Varadan, director</td>
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<tr>
<td>HiDEC/ENRC 700</td>
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<tr>
<td>Ro DiBrezzo, director</td>
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<tr>
<td>HPER 321</td>
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<td><a href="http://itrc.uark.edu/">http://itrc.uark.edu/</a></td>
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<tr>
<td>Bill Hardgrave, director</td>
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<tr>
<td>WCOB 246</td>
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<td><a href="http://www.uark.edu/depts/ifse/">http://www.uark.edu/depts/ifse/</a></td>
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<td>Justin R. Morris, director</td>
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<td>University Centers and Research Units</td>
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<tr>
<td><strong>INTERNATIONAL CENTER FOR THE STUDY OF EARLY ASIAN AND MIDDLE EASTERN MUSICS</strong></td>
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<td>Rembrandt Wolpert, director</td>
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<tr>
<td>MUSC 201</td>
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<tr>
<td>Melissa Tooley, director</td>
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<tr>
<td>BELL 4190</td>
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<tr>
<td>479-575-6026 <a href="mailto:mbtc@engr.uark.edu">mbtc@engr.uark.edu</a></td>
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<td><strong>NATIONAL AGRICULTURAL LAW CENTER</strong></td>
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<td><a href="http://www.NationalAgLawCenter.org/">http://www.NationalAgLawCenter.org/</a></td>
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<tr>
<td>Michael T. Roberts, director</td>
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<tr>
<td>WATR 107</td>
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<tr>
<td>479-575-7646 <a href="mailto:nataglaw@uark.edu">nataglaw@uark.edu</a></td>
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<tr>
<td><strong>OFFICE FOR STUDIES ON AGING</strong></td>
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<td><a href="http://www.uark.edu/aging/">http://www.uark.edu/aging/</a></td>
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<tr>
<td>Ro DiBrezzo and Barbara Shadden, co-directors</td>
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<tr>
<td>HPER 321X</td>
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<tr>
<td>479-575-5262 <a href="mailto:aging@cavern.uark.edu">aging@cavern.uark.edu</a></td>
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<td><strong>OFFICE OF RESEARCH, MEASUREMENT AND EVALUATION</strong></td>
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<td><a href="http://orme.uark.edu/orme2/index.html">http://orme.uark.edu/orme2/index.html</a></td>
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<tr>
<td>Ronna Turner, director</td>
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<td>WAAX 302</td>
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<td>479-575-5593 <a href="mailto:orme@cavern.uark.edu">orme@cavern.uark.edu</a></td>
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<tr>
<td><strong>SMALL BUSINESS DEVELOPMENT CENTER</strong></td>
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<td><a href="http://sbdc.waltoncollege.uark.edu/">http://sbdc.waltoncollege.uark.edu/</a></td>
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<tr>
<td>Tracey Jeffers, director</td>
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<tr>
<td><strong>SUPPLY CHAIN MANAGEMENT RESEARCH CENTER</strong></td>
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<td><a href="http://scmr.uark.edu/">http://scmr.uark.edu/</a></td>
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<tr>
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<tr>
<td>Molly Longstreth, director</td>
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<tr>
<td>HOTZ 123</td>
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<tr>
<td>479-575-4222 <a href="mailto:src@uark.edu">src@uark.edu</a></td>
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<tr>
<td><strong>UNIVERSITY OF ARKANSAS COMMUNITY DESIGN CENTER</strong></td>
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<td><a href="http://www.uark.edu/depts/uacdc/">http://www.uark.edu/depts/uacdc/</a></td>
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<tr>
<td>Stephen Luoni, director</td>
</tr>
<tr>
<td>104 Northeast Ave.</td>
</tr>
<tr>
<td>Fayetteville, AR 72701</td>
</tr>
<tr>
<td>479-575-5772 <a href="mailto:uacdc@uark.edu">uacdc@uark.edu</a></td>
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<tr>
<td><strong>UNIVERSITY OF ARKANSAS ECONOMIC DEVELOPMENT INSTITUTE</strong></td>
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<tr>
<td><a href="http://uaedi.cast.uark.edu/">http://uaedi.cast.uark.edu/</a></td>
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<tr>
<td>Otto J. Loewer, director</td>
</tr>
<tr>
<td>226 Engineering Hall</td>
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<tr>
<td>479-575-5118</td>
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VISION STATEMENT

The Division of Student Affairs enhances the University of Arkansas experience by helping students to become intellectually engaged, more self-aware, and strongly bonded to the University.

Mission Statement

The Division of Student Affairs’ mission is to provide programs and services to promote academic success and student development.

Core Values

• Act as partners and collaborators in all endeavors.
• Exercise our role as educators in the student learning process.
• Provide friendly, helpful and responsive service.
• Treat all individuals with dignity and respect.
• Preserve the highest ethical standards based on trust, honesty and integrity.
• Encourage and model civility in all relationships.
• Be an inclusive community.

The Vice Chancellor for Student Affairs administers the departments of the Division of Student Affairs and provides leadership in the development of programs and services that supplement the classroom experience of students and enrich the quality of campus life. The Vice Chancellor serves as a liaison to other administrative offices, faculty, and student governing groups. The office is a central source of information concerning University policies and procedures affecting student life and co-curricular programs and services.

Students are encouraged to bring their concerns, questions, and ideas to the attention of the Vice Chancellor or the Dean of Students.

The Associate Vice Chancellor for Student Affairs and Dean of Students offers advising and referral services for individual students and many student organizations. A wide variety of educational programs and services are developed to meet the needs of the campus community. Recognizing a diverse and changing student population, the staff works with faculty and University personnel to provide the best possible experience for all students.

STUDENT SERVICES

Enhanced Learning Center

The purpose of the Enhanced Learning Center (ELC) is to assist the University of Arkansas in achieving its commitment to retain and graduate more students. The ELC provides a centralized, University-wide, comprehensive academic support center. Services include tutoring in a variety of first- and second-year courses as well as supplemental instruction, study-skills education, individualized educational planning, math and writing resources, and academic coaching. Services offered at the ELC are available to all UA students.

The center is a collaboration of several academic support programs including: Student Support Services, the Quality Writing Center, SOAR Centers, and the Math Resource and Tutoring Center.

The ELC opened in fall 2003. The center is located on the ground floor of Gregson Hall and features a state-of-the-art computer lab, laptop checkout, an open-study area, glassed-in study rooms, a conference room, and staff offices. Hours of operation are from 8 a.m. to 10 p.m. Monday through Thursday, 8 a.m. to 5 p.m. on Friday, and 5 p.m. to 10 p.m. on Sunday. We may be contacted by phone at 479-575-2885 or visit us on the Web at http://www.elc.uark.edu/.

Services for Non-Traditional and Commuter Students

Increasing numbers of non-traditional students are attending the University. A non-traditional student is defined as an undergraduate who is 25 years of age or older, is enrolled part-time, is financially independent, has interrupted his/her education, is a single parent, works full-time, is married, or has dependents. Recent figures indicate that approximately 25 percent of undergraduate students at the University of Arkansas are non-traditional and 70 percent of all students live off campus. The mission of the Office for Non-Traditional & Commuter Students is to provide prospective and currently enrolled non-traditional and commuter students with support, information, and resources to meet their unique needs. The office will assist individuals with problem solving and provide information and referrals. The office maintains an e-mail list service and sends out a monthly newsletter full of information and events of interest. The ONTCS Discussion Board is an online forum where UA students may participate in discussions concerning childcare, housing, parking/transit, roommates, carpooling, or other general topics.

For further information, visit the office on the sixth floor of the Arkansas Union, Room 628, contact us by telephone 479-575-7351; e-mail ontcs@uark.edu, or view the Web site at www.uark.edu/admin/ontcs/.

In addition, several Student Affairs areas provide particular programs for non-traditional and commuter students. Orientation has sessions for transfer and adult students. Campus Dining Services offer meal plans for off-campus students. Counseling and Psychological Services (CAPS) provides a number of workshops and support groups designed to meet the special needs of adult learners.

Student Support Services

Student Support Services (SSS) is a federally funded TRiO program that has been contributing to the University of Arkansas campus since
1976. The purpose of SSS is to retain and graduate first-generation, income-eligible, and disabled students. Through holistic planning and preparation, the SSS program equips its participants with the skills to successfully matriculate and graduate with a baccalaureate degree from the University of Arkansas.

SSS provides a variety of services to all enrolled participants including: academic, personal, career, and financial-aid counseling; one-on-one and group tutoring; academic, social and cultural enrichments; honor roll and achievement awards; study skills and etiquette instruction; as well as career and graduate school preparation. All SSS participants have access to a high-tech computer lab, wireless laptop computers, a quiet place to study, and friendly staff ready to help.

SSS is located within the Enhanced Learning Center on the ground floor of Gregson Hall. Call 479-575-3546 or visit the Student Support Services Web page at http://www.uark.edu/sss/.

Services for International Students

The Office of International Students and Scholars serves foreign students and scholars and enhances the global awareness of the UA community. The office provides pre-arrival assistance and a comprehensive orientation program for newly admitted international students each semester. Cross Cultural Mentors provide one-on-one contact and group activities for new international students during their first semester, assisting them in their adjustment to the academic community and the Fayetteville/Northwest Arkansas area. The office provides services such as immigration advising, employment authorization, non-resident tax filing assistance, and other programs and services that help students and scholars reach their academic and personal goals and make their time at the University of Arkansas more productive and enjoyable.

The office administers four outreach programs that give students an opportunity to learn about U.S. life and culture while enriching the community’s knowledge and appreciation of diverse populations and cultures. These are: the Friendship Partner program, which pairs students with local families who share American culture, daily life, and special activities with students; the Conversation Club program, which provides students with a small-group setting in which to practice conversational English with native speakers; the International Culture Team, a group whose members speak or share other skills and talents through presentations at community organizations, representing their home countries and cultures; and the Spouses Program, which brings together spouses of students and scholars to build friendships and introduce resources in the community that would benefit them.

The office sponsors various events including: the celebration of International Education Week each fall, and annual seminars for immigration attorneys. A number of registered student organizations specific to various country, culture, or language groups are linked with the office including the International Students’ Organization (ISO), a group for U.S. and international students, which organizes activities such as the International Bazaar and an annual banquet.

The Office of International Students and Scholars is in Holcombe Hall, Room 104; phone 479-575-3546; fax 479-575-7084; e-mail iss@uark.edu; Web: http://www.uark.edu/iss/.

Office of Student Mediation and Conflict Resolution

The Office of Student Mediation and Conflict Resolution provides an informal, impartial, and confidential means of conflict resolution to students and the campus community. It is the goal of the office to foster a culture of community, safe and open dialogue, and to encourage cooperative problem resolution. If you contact the office to address a specific conflict, an ombud will: listen to your concerns, provide facilitation or mediation services when appropriate, value diversity, hear all perspectives, assist you in considering your options for resolution, and remain impartial to all parties involved. Services are confidential, and no identifying records are kept.

Educating the University community and maintaining effective processes are important components of preventing conflicts from escalating and can help enable University students and employees to effectively address adversity themselves. Training is available in alternative conflict resolution techniques, theory, and practice. Workshops are customized to fit specific needs. Recommendations may be made to administrators to improve processes that may inadvertently create conflicts, or inhibit informal resolution. Our goal is to create an environment that supports the early resolution of conflict.

The Office of Student Mediation and Conflict Resolution is in the Arkansas Union, Room 632; phone 479-575-4831; Web: http://www.uark.edu/ua/ombuds/.

Greek Life

The Office of Greek Life facilitates the educational process and provides resources related to programs that promote the growth and development of students affiliated with fraternities and sororities on campus. The overall mission is to enhance the academic, cultural, moral, and social development of students in Greek organizations; provide training in leadership and other personal and social skills; promote student involvement in extracurricular activities and community service projects; and promote Greek Life as a productive and viable lifestyle on campus. Programs such as Recruitment, Greek Weekend, Greek Life Facilitators, and Greek 101 are coordinated by the Office of Greek Life, the Interfraternity Council, the Panhellenic Council, and the National Pan-Hellenic Council.

The Interfraternity Council (IFC), Panhellenic Council (PHC), and National Pan-Hellenic Council (NPHC) are the governing bodies for 11 national sororities and 15 fraternities. The officers and representatives of IFC, Panhellenic, and NPHC work with the Office of Greek Life to provide positive programs and leadership opportunities to the members of the Greek organizations. The Greek Life office is in the Arkansas Union A697; phone 479-575-5001 or fax 479-575-3531; Web: http://uagreeks.uark.edu/.

Multicultural Center

The Multicultural Center enhances the University of Arkansas academic experience by preparing students for life in a diverse society. Seeking to provide an environment that promotes cross-cultural interaction among all students, the Center staff collaborates with the University community to provide educational, cultural and social programs. Academic and extracurricular resources are available to assist in the development and advancement of an inclusive learning community.

The Center offers a large gallery area for programming, art displays and cultural exhibits, meeting space, a small resource library that includes books, videos and board games, as well as an informal lounge where students can study or relax between classes. Students are encouraged to take advantage of these resources, and to become involved with the various student organizations offered at the University of Arkansas. Located on the fourth floor of the Arkansas Union in Room 404, the Multicultural Center may be contacted at 479-575-2064 or on-line at http://multicultural.uark.edu/.

Reasonable Accommodations for Students with Disabilities

The Center for Students with Disabilities (CSD), 104 Arkansas Union, is the central campus resource for students who require reasonable accommodations in order to access the programs, services and activities offered through the University. CSD staff work in partnership with the individual student to communicate and facilitate any accommodation needs to faculty and staff. Accommodation
determination is based on an analysis of medical or psychological documentation provided to the CSD by the student. Students must meet with one of the CSD staff to discuss their needs and provide such documentation before any accommodations can be granted.

To register for services or for more information, contact the Center for Students with Disabilities, University of Arkansas, 104 ARKU, Fayetteville, AR 72701, phone 479-575-3104 (voice) or 479-575-3646 (TTY); e-mail: ada@uark.edu; Web: http://www.uark.edu/us/csd/.

Office of Community Standards and Student Ethics

The mission of the Office for Community Standards and Student Ethics (OCSSE) is to provide an equitable and effective educational system that promotes responsibility, individual growth, accountability, and student learning through community outreach, peer mentoring, and enforcement of the Code of Student Life. The office is designed to provide an equitable process for dealing with alleged infractions of University rules, regulations, and/or laws by students. This system is informal, non-adversarial, and intended to be a part of the total educational process of the University. Students are encouraged to make responsible decisions and to be accountable for their actions. In addition, students who witness violations of the Code or who are victims of inappropriate or illegal behavior perpetrated by other students are encouraged to report such activity to the Office of Community Standards and Student Ethics.

Students who are interested in involvement with the All-University Judicial Board or the PEERs (Peers Educating Ethical Razorbacks) program should contact the Associate Dean of Students of the OCSSE. For more information see the Student Handbook, available in the Administration Building, Room 325. The Office of Community Standards and Student Ethics is in the Administration Building, Room 325, phone 479-575-5170; Web: http://www.uark.edu/ethics/.

First Year Experience Programs

The First Year Experience Programs at the University of Arkansas is a collaborative effort developed to enhance the academic and social integration of incoming students through a variety of classroom and co-curricular activities. Faculty and Student Affairs professionals work together to offer special assistance and promote skills designed to help students experience a fulfilling, rewarding, and successful first year at the University, and to assist them in reaching their ultimate goal of completing a degree.

First Year Experience Programs supports eight major initiatives: Orientation, ROCK Camp, Welcome Weeks, Academic Convocation/ Burger Bash, Help-A-Hog, Family Weekend, Parent Partnership Association, and First Year Experience seminar courses. First Year Experience seminar courses are guided by an advisory board of Student Affairs professionals and First Year Experience course coordinators from each academic college. University of Arkansas executive administrators, faculty and staff participate in these programs as speakers, mentors or through other means of engagement. By providing transitional support for incoming students, First Year Experience programs effectively promote the students’ academic growth and support the mission of the University.

The First Year Experience programs office is in the Arkansas Union, Room A687; phone 479-575-5002; Web: http://fye.uark.edu/.

PRE-COLLEGE PROGRAMS

The Office of Pre-College Programs consists of eight programs, serving Arkansas’ brightest and best students who demonstrate the potential and desire to attend college. These programs are the Gifted and Talented Scholars and Summer Institute, Academy for Mathematics and Sciences, Educational Talent Search, College Project, Upward Bound/REAL, Veterans Upward Bound, and Summer Engineering and Science Research Experience. All participants receive multifaceted services to assist them with developing the skills, information, and resources necessary for college success.

As an ongoing mission, Pre-College Programs actively solicits collaborative partnerships with businesses, communities at large, and various departments within Student and Academic Affairs. These efforts enrich the services and learning opportunities available to participants and provide possibilities for the expansion of programming. For additional information, visit our office at 200 Hotz Hall, call 479-575-3553, or contact us online at http://precollege.uark.edu/.

Academy for Mathematics and Sciences

The Academy for Mathematics and Sciences serves students in grades 9-12 from a four-county area in Northwest Arkansas. This college preparatory program for students excelling in the academic areas of math and science encourages post-secondary study in related career fields. The program includes a six-week residential component in the summer and an academic component year round. An integrated curriculum focusing on group and individual research projects in math, science, and engineering is supplemented with offerings in English, foreign language, literature, and computers. A Web-based curriculum and discussion forums provide enhanced and ongoing student involvement throughout the year with the campus-based project. College tuition and credit is available to students bridging from their senior year in high school to college.

Educational Talent Search and College Project

Educational Talent Search and College Project are early intervention projects. Serving 1,600 students in grades 6-12, the programs promote the skills and motivation necessary for successfully completing a baccalaureate degree. Emphasizing personal/career development, technological/academic skills, ACT readiness, and college preparatory workshops, the programs prepare students to meet their college entry goals. Academic monitoring, counseling, and tutoring services are incorporated to facilitate the progress of each student. Summer enrichment and campus-based events provide ongoing opportunities for institutional and faculty involvement.

Gifted & Talented Scholars and Summer Institute

The University of Arkansas Gifted and Talented Scholars program was established to acknowledge the best and brightest youth throughout the state of Arkansas. Nominated by local educators, Gifted and Talented Scholars represent a select group of students, in grades 6-12, with exceptional academic ability and potential. The Gifted and Talented Scholars Summer Institute provides an intensive three-week residential experience for academically talented students completing the eighth and ninth grade. This advanced and educationally dynamic learning environment supplements all accelerated academic learning with a variety of extracurricular activities to address the social and affective needs of all participants.

Upward Bound and REAL

Upward Bound is designed to offer challenging pre-college experiences to students of high academic ability. Services are designed to develop the essential skills, study habits, and discipline necessary for success in high school and college. The project serves 60 students, in grades 9-12, from participating schools in Benton and Washington counties. Participants commit to the program until high school graduation and participate in both a six-week summer residential program and an academic year component. Being curriculum-based, the program provides exposure to a wide variety of academic, cultural, and social opportunities, simulating a college experience. Upward Bound students completing their senior year of high school receive free
tution for up to six hours of college credit. A second Upward Bound program, R.E.A.L. (Reaching Educational Aspirations of Latinos/as) serves 50 Latino/a students in the Rogers and Springdale Public School districts.

**Veterans Upward Bound**

This program identifies and serves the unique needs of 120 eligible veterans from Northwest Arkansas who have the academic potential and desire to enter and succeed in a post-secondary program of study. Eligible veterans have completed a minimum of 180 days of active duty in the military or Coast Guard and hold any discharge other than dishonorable. Services include tutoring; guidance counseling; assistance in filing financial aid and VA benefit forms; academic/career assistance; test preparation for entrance exams; and courses in English, Spanish, math, science, and computer technology. Courses are offered each semester.

**Summer Engineering and Science Experience**

Summer Engineering and Science Research Experience is a collaboration between the University of Arkansas and Arkansas School for Mathematics, Sciences and the Arts that provides a high-quality educational and research experience for talented scholars. This pilot program accommodates 10 students and includes an in-resident seven-week summer program.

**UNIVERSITY CAREER DEVELOPMENT CENTER**

The Career Development Center provides a comprehensive career development program designed to meet the needs of the University of Arkansas community. The center assists students and alumni in the development of skills necessary for lifelong career management.

The center provides individual and group career advising sessions; a one-hour credit “Career Decision-Making” course; career planning and job search workshops; individual assistance with resume preparation and job interview skills; resources for experiential education opportunities; career interest assessments; a career resource library; and placement services.

Students are encouraged to begin working with the staff of the Career Development Center during their first year at the University of Arkansas. Advisers assist students in selecting a college major, in obtaining a cooperative education or internship placement, and in preparing for their job search or graduate/professional school application. A full-range of career fairs is offered each semester including all-campus fairs and individual industry-specific fairs.

The Career Development Center staff members welcome opportunities to present career planning or job search information to students in the classroom. The Career Center also encourages faculty and staff to partner with them in hosting employers for on-campus recruiting visits. There are valuable opportunities to develop strong professional relationships with the 300-400 corporate recruiters who visit our campus each year.

The University Career Development Center provides services and educational programs to students, alumni, former students, faculty, staff, and their families. A satellite Career Center in the Walton College of Business serves students and alumni in the Walton College.

For further information, contact the University Career Development Center, ARKU 607, 479-575-2805, or visit our Web site at http://career.uark.edu/.

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**UNIVERSITY HEALTH CENTER**

**Pat Walker Health Center**

The Pat Walker Health Center provides professional and comprehensive medical care, mental health care, health education, and health promotion for the University of Arkansas community, including students, faculty, and staff. Committed to physical, mental, spiritual, emotional, and social health, the highest standards of quality, and an appreciation of the value of each individual, the Pat Walker Health Center services and programs support the education and development of each individual. Pat Walker Health Center services include:

**Medical Services**

Professional medical staff including physicians, nurse practitioners and registered nurses provide primary health care, as well as women’s health care. An allergy clinic and a travel immunization clinic are also available. The Pat Walker Health Center is particularly advantageous to the campus community with a comprehensive clinical laboratory, X-ray facilities, and a licensed pharmacy with both prescriptive and over-the-counter medications.

**Counseling and Psychological Services**

Counseling and Psychological Services (CAPS) provides a wide range of consultations to students, students’ partners, staff, and faculty of the University of Arkansas. Psychologists, social workers, and professional counselors work with students to solve problems, understand themselves, grow personally, and develop more satisfying relationships with friends and family. In addition to office consultations and therapy sessions, students have opportunities to participate in educational programs on campus as well as access to 24-hour emergency services for mental health crises.

**Health Promotion and Education**

A unique feature of the Pat Walker Health Center is the complete focus on the promotion of good health and prevention of negative health conditions. Professional health educators serve the campus community with wellness and prevention activities delivered in a variety of educational settings including everything from individual consultations to one-hour credit classes. Students benefit from the breadth of health and lifestyle topics addressed, which help them attain success in all aspects of their lives.

The Pat Walker Health Center opened at 525 North Garland Avenue in November 2004, with expanded services for the University of Arkansas community.

Students pay a per credit hour semester health fee that covers professional office visit charges. Student spouses are eligible for services and may pay the health fee. Services other than professional office visits are the responsibility of the patient and/or their health insurance plan. The University strongly recommends that all students have health insurance. A student health insurance policy endorsed by the Associated Student Government is available to all students, student spouses, and their dependent children. Students may enroll in this plan at the Pat Walker Health Center.

The Pat Walker Health Center welcomes inquiries about specific services at 479-575-4451; TTY 479-575-4124. More information is available on the Web at http://health.uark.edu/.

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UNIVERSITY HOUSING

University Housing is committed to providing a quality living and learning environment that both challenges and supports the personal, social, and academic development of our residents and their diverse communities.

Experience and extensive research nationwide has shown that academic success in the first year and beyond is directly linked to residing in an on-campus residence environment. In an effort to increase the academic success of our entering students, the University of Arkansas requires all single freshmen under the age of 21, who do not reside with a parent in their permanent home, to live in an on-campus residence hall their first year. Requests to live somewhere other than with parents in their permanent home are not likely to be approved under most circumstances. The Freshmen Residency Requirement does not apply to students who have earned 24 credit hours at another college or university (even if the hours are not transferable). Students planning to live with their parents in their permanent home, or to request an exemption from the University of Arkansas Freshmen Residency Requirement, are encouraged to complete all required paperwork prior to attending an orientation session. Failure to do so could cause long delays in the orientation process.

Students who wish to apply for an exemption to the University’s requirement for single freshmen to live on campus may refer to the information on our Web site: http://housing.uark.edu/.

Each residence hall has a Resident Director. This individual is selected for his or her academic credentials and interest in helping others, as well as his or her ability to work well with college students. In addition, every area or floor is staffed by a Resident Assistant who is an upperclassman with training, experience, and knowledge to answer students’ questions and, more importantly, to help students find their own answers. Counselors in Residence (graduate assistants) provide short-term counseling for students living in the residence halls and Carlson Terrace apartments, in response to personal, social, academic, and developmental needs.

Residential living offers several options: male, female, co-ed, or apartments. Rooms are available for visually or hearing impaired students as well as those who are physically challenged. Special-interest living options, such as honors programs, first-year experience, substance-free, architecture, engineering, pre-med/science, business and technology are also available to students. All residence hall exterior doors are secured and monitored 24 hours each day. Students are provided access to their assigned hall via their student identification card and the electronic access system. Additional information is available on the University Housing Web site.

Each of the three separate dining facilities on campus is managed by Campus Dining Services and provides a natural setting for socializing with friends and enjoying a wide variety of high-quality, nutritious meals. All students living in a residence hall, except those residing in summer school housing, are required to have a meal plan. There are several meal plans available to meet the needs of both on-campus and off-campus students. Learn more about Campus Dining Services online at http://dining.uark.edu/.

ARKANSAS UNION

The mission of the Arkansas Union is to provide unique and diverse services, programs, conveniences, and amenities primarily for students, as well as for other members of the University of Arkansas family – faculty, staff, alumni, and guests. As the center of college community life, the Union compliments the academic experience through an extensive variety of cultural, educational, social, and recreational programs. These programs provide the opportunity to balance course work and free time as cooperative factors in education.

The Arkansas Union serves as the community center of the University for all members of the college family. As the “living room” of campus, the Union is the gathering place of the college. The Union provides services and conveniences that members of the campus community need in their daily lives and creates an environment for getting to know and understand others through formal and informal associations. Included in the Union are meeting, reception, and banquet rooms; lounges; a ballroom; Anne Kittrell Art Gallery; theater; video theater; and a computer lab. The Food Court offers Chick Fil A®, Burger King®, salads, soups, Tuscan Oven pizza/pasta, Sub Generation submarine sandwiches, barbecue, hot rotisserie foods, Mexican specialties, baked items, and Bamboo Asian Cuisine. RZ’s Coffeehouse® and a Club Red “grab and go” convenience store are located in the building addition. Complete catering services are provided for meeting and function support. In addition, the Union houses the University Bookstore, U.S. Post Office, Union Hair Care, Union Copy Center, First Security Bank, Razorback Shop, Computer Store, Student Technology Center and Computer Lab.

As the center of the college community life, the Union complements the academic experience through an extensive variety of cultural, educational, social, and recreational programs. These programs provide the opportunity to balance course work and free time as cooperative factors in education. The Arkansas Union is the center of much student activity and is a perfect place for students to get involved on campus. University Programs provides many student events and activities. These activities are planned, organized, and presented almost totally by students. Typical programs are major concerts, symposium speakers, theater productions, video programs, fine arts programs, and art gallery shows. The Union is a student-centered organization that values participatory decision-making. Through volunteerism, its boards, committees, and student employment, the Union offers first-hand experience in citizenship and educates students in leadership, social responsibility, and values.

The Student Life Center in the building addition provides office space for many Registered Student Organizations and Student Support offices. The Office of Student Involvement and Leadership provides resources for student organizations. More than 25 student organizations including Associated Student Government, University Programs, and the student radio station are housed in the Union. Many other offices provide goods and services to support students, including the Office of Student Involvement and Leadership, Campus Card Office, Razorback$ program, First Year Experience, Greek Affairs, Orientation, Office of Non-Traditional and Commuter Students, Student Mediation and Conflict Resolution, Assistant Vice Chancellor for Student Affairs, Multicultural Center, Associated Student Government, University Career Development Center, and Center for Students with Disabilities.

Office for Student Involvement and Leadership

The Office for Student Involvement and Leadership, located in the Arkansas Union, is the central location for student organizations and activities at the University. The primary mission of the department is to provide students with opportunities for involvement and to enable students to learn and practice leadership and management skills that complement classroom learning.

The Office of Student Involvement and Leadership is responsible for the oversight and administration of the following five areas:

Registered Student Organizations

There are more than 200 registered student organizations at the University. The Office of Student Involvement and Leadership provides student organizations with assistance and services to help them succeed, including the annual Razorbash event, facility reservations, and fund-raising assistance, trademark forms, mailboxes, and locker
space. The office also assists student organizations in event planning and presentations. Limited office space in the Arkansas Union is awarded annually to organizations by the Arkansas Union Advisory Council and is paid for by the Associated Student Government.

Registered Student Organizations vary from those in professional fields to special interest activities. They also include religious organizations, community-oriented outreach programs, political interest groups, student publications, minority groups, departmental and professional organizations, social/fraternal organizations, and various honorary societies. Registered Student Organizations not affiliated with national social/fraternal organizations may be eligible for funding from the Associated Student Government.

Leadership and Volunteerism Programs

The Leadership Programs are designed to provide training, education, and development for students across campus. The primary programs in this area are Emerging Leaders, the LeaderShape Institute, and the Leadership Resource Library. These interactive programs motivate students and develop key leadership skills related to self-awareness, management, interpersonal relationships, organizational leadership, and networking. The integral role that students play in implementation of these programs serves as a part of the educational process for all students involved.

The Volunteer Action Center encourages civic engagement through community service and service learning. Large-scale volunteer events, such as “Make a Difference Day” and “Students’ Day of Caring,” are sponsored as student-led programs where university students can participate in various volunteer projects on the assigned program date. The Volunteer Action Center’s e-mail list service provides a clearinghouse for volunteer and community service opportunities in the Northwest Arkansas area.

University Programs

University Programs is a volunteer student organization responsible for planning and coordinating more than 350 events annually for the campus community. University Programs provides students with cultural and educational experiences, entertainment, and fun. Seven committees, all made up of students, select, schedule and produce events such as concerts, movies, lectures, fine arts performances, gallery exhibitions, and daytime programs. Being a part of University Programs gives the student committee members leadership training and real opportunities to gain practical planning experience. Supported by a student activity fee, University Programs events, with the exception of major concerts, are free to students.

Associated Student Government

The purpose of the Associated Student Government is to act as an organized voice for all students of the University of Arkansas, to effectively represent students in the University’s decision- and policy-making process and to provide a broad educational experience for students while promoting citizenship on campus and in the greater community. Associated Student Government has many opportunities for involvement including the positions of Executive Officer, Executive Cabinet, ASG Senate, ASG Senate Committees, ASG Judiciary, and numerous University Committee Appointments.

Friday Night Live

Friday Night Live programming at the University of Arkansas is a collaborative effort for retention, programming, education and entertainment. It is designed to assist students in developing new and diverse relationships, particularly in interactive social events and promoting healthy lifestyles. The programs occurring on campus during the weekend are of the highest quality, represent a multiplicity of views, bring individuals together into a community setting, and are diverse enough to be enjoyed by all who participate.

STUDENT ACTIVITIES

An integral part of a University education is what can be gained through the worthwhile use of leisure time. Students are encouraged to balance involvement with their academic pursuits and interests. There are organizations, intramural sports, spectator sports, lectures, concerts, theatrical offerings, and other activities in which students are encouraged to participate. The Northwest Arkansas region represents one of the best recreational areas in the nation.

Student Media

Student Media is an umbrella organization that administers and advises the official student media outlets of the University. These outlets are: the student newspaper, The Arkansas Traveler; the UA yearbook, The Razorback; the student television station, UATV; the student radio station, KXUA; and the student magazine for the arts, Ozark Review. All provide a forum for student expression, entertainment, news and information of interest to the campus community. Other than a small support staff, these groups are entirely staffed by student employees and volunteers, including editors and station managers. For more information, contact Student Media at 479-575-3406.
MISSION AND OBJECTIVES

The mission of the Honors College at the University of Arkansas is to provide exceptional opportunities for outstanding undergraduates to enhance their educational experiences and academic performances, and to serve the University by underscoring its reputation as a research institution, where students come first. This mission incorporates four areas of responsibility: recruitment; administration of honors fellowships, Honors College research grants, and study-abroad scholarships; coordination of honors programs and curricula; and coordination of related services.

FACILITIES AND RESOURCES

The Dean's Office for the Honors College is housed on the fourth floor of the Administration Building. Large honors lounges, designed as study and relaxation areas for students, may also be found on the fourth floor. The Honors College was created by a $200 million gift from the Walton Family Charitable Support Foundation with the goal that an honors education would be available in every college, with the Honors College serving as an umbrella organization, providing coordination of honors efforts among the colleges and additional scholarship and service opportunities for participating students.

The Academic Scholarship Office is part of the Honors College. Scholarships are awarded to a variety of students, both incoming and current, at the University of Arkansas. Students do not have to be in the Honors College to receive many of these scholarships though participation in honors of qualified students is always encouraged.

Scholarships awarded to incoming freshmen not funded through the Honors College include the Chancellor’s Scholarship, the Honors College Academy Scholarship, the Silas Hunt Scholarship, the University Scholarship, and the Leadership Scholarship. Scholarships for current students include the Brandon Burlsworth Memorial Scholarship, the R. Coin Mason Scholarship, the Blanche Bledsoe and Clarence J. Rosecrants Senior Endowed Scholarship, the Boles-Zaulx Scholarship, the Alfred Allen Scholarship, and many more. These scholarships are available to students across the University. For additional information see the chapter on Financial Aid and Scholarships in this catalog.

The Office of Post-Graduate Fellowships provides assistance to all students who are applying for international graduate fellowships: the Marshall, Rhodes, Gates Cambridge, Rotary, and Fulbright, and national graduate fellowships such as those provided by the National Science Foundation, the Department of Defense, the Department of
Energy, and the Mellon and Jacob Javits Foundations. The office also assists students with applications for nationally competitive undergraduate scholarships: Barry Goldwater (for outstanding sophomores and juniors in mathematics, science, and engineering), the Truman (for outstanding juniors interested in pursuing a career in public service), the Morris Udall (for competitive students who intended to pursue a career connected to environmental concerns), the James Madison (for students who want to become educators in the social sciences) and many more. The office also provides assistance to graduate, law, and medical school applicants.

The Honors College Governing Board consists of the Chancellor, the Provost and Vice-Chancellor for Academic Affairs, the Dean of the Honors College, the Vice-Chancellor for Student Affairs, and the Vice-Chancellor for University Advancement.

The Honors College Directors’ Council consists of the Directors of the Honors Programs in each of the colleges and is chaired by the Associate Dean of the Honors College. The Honors Directors include the following:

- Duane Wolf, Dale Bumpers College of Agricultural, Food and Life Sciences, Plant Sciences 115
- Kim Sexton, School of Architecture
- Vol Walker 120
- Sidney Burris, Fulbright College of Arts and Sciences
- Old Main 517
- John Norwood, Walton College of Business
- Walton College of Business 328
- Steve Langsner and Nan Smith Blair, College of Education and Health Professions
- Peabody Hall 8
- Carol Gattis, College of Engineering
- Bell Engineering 4184

DEGREES OFFERED

The Honors College does not confer degrees. Honors degrees are conferred by the college of major.

OTHER PROGRAMS

Advanced Placement Summer Institute

The AP Summer Institute is a College Board approved summer program coordinated by the Honors College. The institute provides training to Advanced Placement teachers in American history, biology, calculus, chemistry, composition, computer science, government, literature, physics, psychology, and statistics.

Honors College Internships

Fifty Honors College internships are offered each semester. Students register for a one-hour credit course. The course provides information on applying for scholarships, writing resumes and personal statements, and interviewing skills for internships and fellowships.

COLLEGE ADMISSION REQUIREMENTS

Admission to the Honors College requires that a student first be admitted to an honors program in the college of major. Students admitted to a program are automatically included in the Honors College. Students admitted to the Honors College must have a minimum 28 ACT or SAT equivalent and a minimum 3.5 high school grade-point average. These are the basic requirements for each of the honors programs except the Walton College, which requires a 28 ACT or SAT equivalent and a minimum 3.75 high school grade-point average. Students also can be admitted at the end of the freshmen year by earning a 3.5 GPA on 30 completed hours, or through the end of the sophomore year by earning a 3.5 on 60 completed hours (the total does not include Advance Placement or CLEP credit).

COLLEGE SCHOLARSHIPS

The Walton Family Charitable Support Foundation endowed two major scholarships for incoming freshmen to be administered by the Honors College. The Foundation also endowed funds for current honors students for study abroad and undergraduate research.

Honors College Fellowships provide $50,000 over a four-year period for outstanding incoming freshmen. A separate application is required (applications are available on the Honors College Web page). The deadline for application is February 1. Students will also be required to interview for the fellowships. The award covers tuition, room and board, and provides additional monies for the purchase of a computer and for study abroad.

Honors College Academy Scholarships provide $16,000 over a four-year period for outstanding incoming freshmen from under-represented counties in Arkansas. The application for admission serves as the application for this scholarship.

Honors College Study Abroad Grants are available to competitive students in the Honors College who have completed a minimum of 30 hours, 6 of which must be in honors. A separate application is required and is available in the Honors College Office. Deadlines are October 15 and February 15.

Honors Undergraduate Research Grants are available to competitive students in the Honors College who have completed a minimum of 30 hours, 6 of which must be in Honors. A separate application is required and is available in the Honors College Office. The application includes a five-page summary of the proposed research and a detailed letter of support from the research mentor. Deadlines are October 15 and February 15.

STUDENT ORGANIZATIONS

The Honors College Student Association is a registered student organization sponsored by the Honors College at the University of Arkansas. Membership is open to all University of Arkansas honors students, with no membership fees or dues, and is designed to provide an honors community, uniting honors students from all colleges on campus. The group, which meets monthly, also encourages volunteerism and provides a means for students with similar academic interests to meet in a relaxed setting. Members participate in campus recruiting events and frequently serve as honors liaisons to visiting groups. Their newsletter publication Castalia is published each semester. Additional information is available on the Honors College Web site at http://honorscollege.uark.edu/.

COLLEGE ACADEMIC REGULATIONS

The Honors College wishes to foster an environment of intellectual interaction and development across colleges. To graduate with honors from any college requires a minimum of 12 honors credits and the completion of an undergraduate research project is required. Specific honors hours, thesis, and GPA requirements for Cum Laude, Magna Cum Laude and Summa Cum Laude are set by the college of major.
Dale Bumpers College of Agricultural, Food and Life Sciences

Office of the Dean of the College
E-108 Agricultural, Food and Life Sciences Building
479-575-4446

Dean
Gregory J. Weidemann

Associate Dean
Donna L. Graham

Associate Director/Associate Dean
Richard A. Roeder

Advising Office, Scholarships, Student Relations
E-108 Agricultural, Food and Life Sciences Building
479-575-2252

World Wide Web:
http://www.uark.edu/depts/dbcafls/

E-Mail: dbcafls@uark.edu

MISSION AND OBJECTIVES

The mission of the College of Agricultural, Food and Life Sciences is to prepare graduates who are intellectually enriched, technically competent, environmentally conscious, and ethically responsible. We honor the land-grant tradition and respect the many values of its fabric and heritage while having sensitivity toward change for the future. Our goal is for our graduates to be responsible leaders, possessing strong communication skills, problem-solving abilities, and having commitment to be self-directed, lifelong learners.

To accomplish this, the broad curricula include basic courses in the general sciences and liberal arts, as well as agriculture and human environmental sciences.

History and Organization

As the state’s land-grant university, the University of Arkansas has the responsibility for leadership in agricultural and human environmental sciences. This responsibility is shared with the Division of Agriculture, and it includes teaching, research, and service functions.

The Bumpers College is an integral component of the University of Arkansas and addresses the teaching responsibility of the land-grant university. Its roots lie in the First Morrill Act of 1862, which created the land-grant system by providing a grant of land to each state for the establishment of a college “where the leading objective shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanical arts in such manner as the legislatures of the state may prescribe to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.” Agricultural sciences have been taught at the University of Arkansas almost from the beginning of the institution in 1872. The University conferred the first degrees in agriculture in 1904.

Early instruction and outreach efforts focused on improving rural life for men, women, and children. Farm wives were interested in beautifying the home, food preparation and safety, and gardening. Foods and nutrition, bacteriology, chemistry, and other related subjects held a common scientific interest for both agriculture and home economics, so it naturally evolved that studies in home economics should develop within the realm of agricultural education. Domestic science classes were offered as early as 1909, and a department of home economics was established in 1913. The department was elevated to school status in 1994, and its name was changed to the School of Human Environmental Sciences.

The passage of the Hatch Act in 1887 and subsequent legislation made possible the Agricultural Experiment Station, the research component of the Division of Agriculture. Most faculty who teach in the
Bumpers College also hold appointments in the Experiment Station and are able to incorporate active research into their teaching.

The dissemination of University research in agriculture and human environmental sciences is carried out by personnel in the Cooperative Extension Service, created by the Smith-Lever Act of 1914. Many Extension specialists also hold adjunct faculty status and bring their expertise to the teaching program.

It is this blending of teaching, research, and service functions that create a unique learning environment in the college. As students learn to relate basic areas of science to human needs, they study in laboratory-based classes and are taught in research facilities supported by the Division of Agriculture. Similarly, students are encouraged to intern with professionals in industry and governmental agencies, including the Cooperative Extension Service.

In recognition of the land-grant mission of the University and its commitment to serve the entire state, the Dale Bumpers College of Agricultural, Food and Life Sciences has worked cooperatively with numerous community colleges to organize the Arkansas Consortium for Teaching Agriculture (ACTA). ACTA is designed to facilitate the “seamless” transfer of students from community colleges to the Bumpers College. Coordinated advising, recruiting, and curricula development are working goals of the consortium. Students interested in transferring while enrolled at an ACTA partner school should contact the dean’s office.

FACILITIES AND RESOURCES

The Dale Bumpers College of Agricultural, Food and Life Sciences is composed of ten academic departments and the School of Human Environmental Sciences. The college offers both undergraduate and graduate level degrees.

The Agricultural Food and Life Sciences building houses the dean’s office and the department of Animal Science and serves as the headquarters for the college academic functions. There are six other buildings on campus operated by the college including the Agriculture Building, Home Economics Building, Rosen Center, Plant Science Building, Agricultural Annex, and the Center of Excellence for Poultry Science. Additionally, the Food Science building, Alzheimer Laboratory, Abernathy Agri-Science laboratory, Biological and Agricultural Engineering Laboratory, Pauline Whitaker Animal Science Arena, and the Dorothy E. King Equine Science facilities are located at the Research and Extension Center north of the main campus. These serve as additional teaching laboratories or classroom facilities. Also, the Infant Development Center and the Nursery School are managed by the college to provide instructional training for the child-development program.

Two distance-education classrooms and an agricultural statistics laboratory are available for instructional use. A Teaching and Facility Support Center, located in the Agriculture Building, provides support for faculty and graduate student instructors. Students can receive academic assistance through the Academic Enhancement Program (AEP) coordinated by the dean’s office. Trained counselors provide guidance to students seeking extra assistance. Students can also seek assistance through the Enhanced Learning Center, a campus-wide resource.

Services for Students with Children

Two services administered by the School of Human Environmental Sciences benefit young children whose parents are students at the University of Arkansas.

The Infant Development Center (IDC), located at 536 N. Leverett Street, provides care for children age three months to three years. At least one parent must be a UA student, and priority is given to undergraduate parents, single parents, and families in which both parents are UA students.

The Nursery School provides care for children who are between the ages of three and five years and is open to children from the community. Enrollment in each program is limited, and no provision is made to accommodate “drop-ins.” For fees and other information, call the School of Human Environmental Sciences at 479-575-4306.

COLLEGE SCHOLARSHIPS

In addition to the scholarships awarded by the University, there are a number of scholarships available to students in agriculture and human environmental sciences made possible by generous gifts from many firms and individuals. To be considered for a college scholarship, students must first be admitted to the University. Most scholarships require students to be enrolled full-time, at least 12 credit hours per semester. A college scholarship application, which serves as an application to all available scholarships offered by the college, must be submitted by February 15 each year. A listing of various outside scholarships is available for review in the dean’s office, E-108, Agricultural, Food and Life Sciences Building and on the college’s Web site. There are also miscellaneous outside scholarships for which applications are available in some departmental offices. For more information on scholarships, contact the dean’s office.

STUDENT ORGANIZATIONS

Agricultural Business Club is for students interested in agricultural business and economics.

Agricultural Communicators of Tomorrow (ACT) is designed for students with an interest in agricultural communications. It allows students an opportunity to interact with others with similar interests at the college and professional level.

Agricultural Mechanization Club is a student organization for those with an interest in agricultural technology.

Student Branch, American Society of Agricultural Engineers (ASAE) is an organization for students interested in agricultural engineering.

American Society of Interior Designers (ASID) is a professional society dedicated to serving the entire profession and maintaining the highest possible standards for the practice of interior design. ASID student members participate in a wide range of learning experiences and stimulating programs that complement their academic training. Through the society’s thousands of professional members, student members gain important insight into the professional aspects of interior design.

National Block and Bridle Club is for students who are interested in any phase of animal science. Students with interests in dogs, cats, horses, cattle, sheep or swine will find this club a good place to call home.

Collegiate 4-H/FFA is for any student who has been active in 4-H or FFA or has a current interest in service to these youth-oriented organizations. This club is especially designed for students interested in teaching agricultural education or working in Extension.

Collegiate Farm Bureau was formed in 2002 with support from the Arkansas Farm Bureau Federation. Its goals are to motivate students to become involved in shaping agricultural policy for the state and the nation.

The American Association of Family and Consumer Sciences (AAFCS) offers student membership to all human environmental sciences majors. Monthly meetings highlight various phases of human environmental sciences and provide social contact with other majors. In addition, members become involved in local service projects and may attend statewide workshops and leadership training sessions.

Crop, Soil, and Environmental Science Club is a student organization for those interested in crops and soils through both an agricultural and environmental perspective.

Horticulture Club is a student organization for those interested in
horticulture including floriculture, ornamentals, turf, small fruits and vegetables.

**Hospitality and Restaurant Management Club** is for students who are interested in the hospitality industry.

**Pre-Vet Science Club** is for students interested in veterinary medicine and is especially designed for those students in the pre-veterinary medicine curriculum.

**Food Science Club** is an organization for those students interested in food science.

**Minorities in Agriculture, Natural Resources Related Sciences (MANRRS):** The purpose of this organization is to promote and implement initiatives which foster inclusion and advancement of members of ethnic/cultural groups under-represented in the agricultural and natural sciences and related fields in all phases of career preparation and participation.

**Northwest Family and Child Organization** is an organization for students who are interested in the welfare of young children. The organization, through programs, publications, and trips, offers students information about career opportunities in human development.

**Student Dietetic Association (SDA)** is an organization for students who are interested in the profession of dietetics. The goals are to promote growth in professional attitudes and to provide various programs of interest to the members.

**Fashion Merchandising Club** is an organization open to all students interested in the fashion industry.

**Poultry Science Club** is open to all students interested in any phase of the poultry industry or related fields.

There are also numerous general organizations on the University campus, and students of the Dale Bumpers College of Agricultural, Food and Life Sciences participate in most of them. These include fraternities, sororities, honor and scholarship organizations, religious and music groups, sports organizations, and others.

**Alpha Zeta** is the professional honor fraternity for students of agriculture. To be invited to become a member, a student must rank in the upper two-fifths of the class and be recognized for leadership and character.

**Phi Upsilon Omicron** is the professional honor society for human environmental sciences students. To be eligible for invitation to membership, a student must rank in the upper 35 percent of the class and be recognized for character and leadership.

**Gamma Sigma Delta** is the honor fraternity for graduating seniors, graduate students, faculty, and alumni of the Dale Bumpers College of Agricultural, Food and Life Sciences. Seniors must rank in the upper 25 percent of the class to be eligible for membership, but not more than 15 percent of the class may be elected for membership. The highest-ranking sophomore and the highest-ranking senior are recognized annually by the society.

**Alpha Tau Alpha** is a national honorary professional fraternity for those preparing to become teachers of agricultural education. Its mission is to develop a true professional spirit in the teaching of agriculture, to help train teachers of agriculture who shall be leaders in their communities, and to foster a fraternal spirit among students in teacher training in agricultural education.

**ACADEMIC ADVISING**

Bumpers College advising mission is to enhance the educational experience of and maximize opportunities for students. Therefore, we are committed to a strong, effective academic advising program. Advising plays a significant role in the total process of educating students for lifelong learning. The adviser assists students with the development and implementation of their educational plans.

Research demonstrates that the more contact students have with faculty, the more likely they are to persist and complete their educational goals in a timely manner. Therefore, the college has adopted a faculty advisement model. The faculty adviser serves as a facilitator to assist students in maximizing their education potential. The advising relationship is a partnership between the student and the faculty adviser. It is dependent on effective communication and regular contact.

**Selection of a Major**

A student who elects to major in some area of study in the college should plan the program with a faculty adviser. While undecided students are welcome, early selection of a major will permit better planning and proper sequencing of courses. The student and faculty adviser work closely to ensure that curriculum requirements are met in a timely fashion. A student uncertain about a major will be advised as an undeclared major through the dean’s office.

**DEGREES OFFERED**

All entering students (including freshmen, international and transferring students) admitted to the University of Arkansas, Fayetteville, are eligible to pursue a degree program in the Dale Bumpers College of Agricultural, Food and Life Sciences. Degrees offered are as follows:

- The Bachelor of Science in Agricultural, Food and Life Sciences (B.S.A.)
- The Bachelor of Science in Human Environmental Sciences (B.S.H.E.S.)
- The Bachelor of Interior Design (B.I.D.)

**MAJORS, CONCENTRATIONS AND MINORS**

**Agricultural, Food and Life Sciences – B.S.A. Degree**

**Majors and Concentrations**

- Agricultural Business (AGBS)
  - Agricultural Business and Marketing (ABMM)
  - Pre-Law (PRLW)
  - Agricultural Economics (AGEC)
  - Agricultural Education, Communication and Technology (AECT)
  - Agricultural Education (AGED)
  - Agricultural Systems Technology Management (ASTM)
  - Agricultural Communications (ACOM)
  - Animal Science (ANSC)
  - Crop Management (CPMG)
  - Environmental, Soil, and Water Science (ESWS)
  - Food Science (FDSC)
  - Food Science (FDIC)
  - Food Technology (FDTN)
  - Horticulture, Landscape, and Turf Sciences (HLTS)
  - Poultry Science (POSC)

**Minors Offered**

- Agricultural Business (AGBS-M)
- Agricultural Education (AGED-M)
- Agricultural Systems Technology Management (ASTM-M)
- Animal Science (ANSC-M)
- Crop Biotechnology (CPBT-M)
- Crop Management (CPMG-M)
- Entomology (ENTO-M)
- Environmental, Soil, and Water Science (ESWS-M)
- Equine Science (EQSC-M)
- Food Science (FDSC-M)
- Global Agricultural, Food and Life Sciences (AFLS-M)
- Horticultural Production (HORT-M)
- Journalism (JOUR-M)
- Landscape Design and Urban Horticulture (LHRT-M)
- Pest Management (PMGT-M)
Certificates Offered
Food Safety Manager Certificate of Proficiency (FMGR-CP)
Hazard Analysis and Critical Control Point Coordinator Certificate of Proficiency (HCCP-CP)

In both certificates, students take a concentrated core of Web-based courses focused on the application of scientifically based food-safety systems through the application of HAACP systems. Applicants must have a B.S. degree or seven years of relevant experience in the food industry. See page 87 for the list of courses.

School of Human Environmental Sciences – B.S.H.E.S. or B.I.D. degree

Majors And Concentrations
 Apparel Studies (APST)
  Food, Human Nutrition and Hospitality (FHNH)
  Dietetics (DIET)
  General Human Nutrition (GHNU)
  Hospitality and Restaurant Management (HRMN)
  General Human Environmental Sciences (HESC)
  Human Development, Family Sciences, and Rural Sociology (HDFS)
  Child Development (CDEV)
  Lifespan (LSPN)
  Interior Design (IDES)

Minors Offered
 Human Development and Family Sciences (HDFS-M)
  Human Nutrition (GHNU-M)
  Global Agricultural, Food and Life Sciences (AFLS-M) – See page 74.
  Journalism (JOUR-M) – See page 72.

Minors in Other Colleges: Students in the College of Agricultural, Food and Life Sciences may pursue an academic minor in the Sam M. Walton College of Business or in the J. William Fulbright College of Arts and Sciences. These minors usually consist of 15 to 20 hours of course work. For requirements regarding minors, check the catalog under the department offering the minor. Students must notify the dean’s office of their intention to pursue a minor.

Special (Non-Degree Seeking) Students
 While most students enrolled in the Dale Bumpers College of Agricultural, Food and Life Sciences work toward a degree, students who desire additional education of a specific nature but who do not wish to fulfill all requirements for a degree may enroll as special students.

GRADUATE STUDIES

The Graduate School of the University, in cooperation with the Dale Bumpers College of Agricultural, Food and Life Sciences, offers the Master of Science degree in each of its ten departments and in the School. Six doctoral degrees are offered. More detailed information regarding individual programs may be obtained by contacting the administrative office of each department, or by consulting the Graduate School Catalog.

ACCREDITATIONS

The Bachelor of Science in Human Environmental Sciences (B.S.H.E.S.) degree programs are accredited by the Council for Professional Development of the American Association of Family and Consumer Sciences. The degree program in dietetics is accredited by the Commission on Accreditation for Dietetic Education of the American Dietetics Association. The Bachelor of Interior Design (B.I.D.) degree is accredited by the Foundation for Interior Design Foundation Research (FIDER). The Nursery School and the Infant Development Center in the School of Human Environmental Sciences are accredited by the National Association for the Education of Young Children (NAEYC). The Bachelor of Science in Agricultural, Food and Life Sciences (B.S.A.) in food science is accredited by the Institute of Food Technologists. Teacher education programs in agriculture and family and consumer sciences are coordinated with educational programs in the College of Education and Health Professions and are accredited by the National Council for Accreditation of Teacher Education (NCATE).

OTHER PROGRAMS

Pre-veterinary Medicine

Because Arkansas does not have a college of veterinary medicine, the Arkansas General Assembly has authorized funds for education in veterinary medicine at out-of-state institutions. The State Board of Higher Education is the designated agent for the State of Arkansas, and the Student Loan Authority is authorized to administer the program. Terms and conditions prescribed by the Student Loan Authority are as follows: the grant will cover only out-of-state tuition, and the student will pay his or her own fees and expenses.

Contracts have been negotiated with the Board of Control for Southern Regional Education for education in veterinary medicine at Louisiana State University and at Tuskegee University. Arrangements have also been made with the University of Missouri and Oklahoma State University. Under the provisions of the legislation, only citizens of Arkansas are eligible. They must enroll in and complete the pre-veterinary medicine curriculum to satisfy the admission requirements of these colleges of veterinary medicine.

The pre-veterinary medicine program at the University of Arkansas is administered in the departments of Animal Science and Poultry Science of the Dale Bumpers College of Agricultural, Food and Life Sciences. There are faculty in these departments who help counsel and advise students regarding their pre-veterinary medicine program. There are also faculty veterinarians who provide some insight into the practice of veterinary medicine and are knowledgeable about many of the considerations encountered in establishing a practice upon graduation. Some of these veterinarians have been in private practice; others have been involved in full-time agricultural research since graduation from veterinary medicine and graduate school. Because there is a wide cross-section of experience among these faculty, students find their counsel valuable in planning a future in veterinary medicine.

While it is possible to complete requirements for admission to some colleges of veterinary medicine in two years, most students take three years or more to complete the requirements, and must complete a B.S. degree before being admitted. Students who carefully plan their work may complete a B.S. degree by transferring hours earned in the first two years at an accredited college of veterinary medicine back to the University of Arkansas, provided they complete certain degree requirements at the University prior to entering a school or college of veterinary medicine. These students must complete a minimum of 94 hours of a 124-hour program of prescribed courses. This will require three years and one or two 6-week
summer terms for most students. Therefore, students should inform their advisers early in their program that they wish to be in a pre-vet degree program.

The Bumpers College of Agricultural, Food and Life Sciences is ready to assist students in fulfilling their pre-veterinary medicine requirements whether they desire to complete them in a two-year span or over three or four years. The supporting departments at the University, including chemistry, English, and biological sciences, all offer quality courses that give a student an excellent background for the pursuit of a degree in veterinary medicine.

To earn the professional degree, a student must complete the pre-veterinary medicine requirements and the four-year prescribed curriculum in one of the colleges of veterinary medicine.

**Required Examinations:** All required examinations are given on campus and administered by testing services (Hotz Hall 713, phone, 479-575-3948). Exams must be taken by late fall of the year prior to entering vet school. Application forms for taking the exams can be picked up at testing services. Applications should be turned in at least 30 days prior to examination. Students seeking admission to University of Missouri may take the MCAT on one of the two national testing dates in the spring or early fall. All other contract schools accept the Graduate Records Exam (GRE), which is given frequently.

Students applying for admission to Oklahoma State University must take the general test and the biology test of the G.R.E., which is administered frequently on campus.

**Applications:** Students applying to Louisiana State University, Oklahoma State, and University of Missouri must fill out a Veterinary Medical College Application Service (VMCAS) form, available at their online site (www.aavmc.org). Students must complete the application and have it postmarked by Oct. 1 of the year prior to beginning studies. Applications forms for Tuskegee University may be obtained directly from Tuskegee University. Application forms are due by Dec. 5 of the year prior to entering school. Since requirements for the various veterinary schools periodically change, it is important that students check with their advisers about specific school requirements as they progress through the pre-veterinary requirements.

All students should contact the Coordinator of Veterinary Medicine, Dale Bumpers College of Agricultural, Food, and Life Sciences B114, University of Arkansas, Fayetteville, AR 72701, phone 479-575-6300 in the spring prior to making full application for admission to a veterinary school to verify that they can complete the requirements for the school they wish to attend. Pre-professional requirements and specific requirements for admission to colleges of veterinary medicine at Louisiana State University, Oklahoma State University, University of Missouri, and Tuskegee University are listed with information on the Web for the department of Animal Science at http://www.uark.edu/depts/animals/vet_curriculum_requirements.htm.

**HONORS PROGRAM**

The Bumpers College Honors Program provides students with opportunities for intellectual enrichment beyond the traditional undergraduate experience. This is accomplished through special honors courses, completion of an undergraduate honors thesis, and other significant activities. Students must maintain a GPA of 3.25 to remain in the program.

Students in the AFLS Honors Program are required to complete 6 hours of AFLS Honors courses chosen from the following:
- AFLS 1011H Honors Orientation
- AFLS 3211H Honors Professional Development
- AFLS 3313H Global Issues in AFLS
- AFLS 401VH Honors Special Topics -- Topics include:
  - Management and Leadership (1 hour credit), Exploring Ethics (1 hour credit), Logic, Reasoning, and Scientific Argument (1 hour credit), Personal Excellence (1 hour credit), Project Proposal Development I & II (1 hour credit each), Laboratory Rotations (2 hours credit), Honors students are also required to complete 6 hours of thesis credit as AFLS 400VH.

To support their research or creative projects, participants in the Honors Program are eligible to apply for undergraduate research grants from the AFLS college and the Honors College as well as Student Undergraduate Research Fellowships (SURF) awarded by the state. The results of the student’s original research or creative project can be published in *Discovery*, the college undergraduate research journal. Honors students can also apply to the Honors College for Study Abroad and Conference grants. The transcript and diploma of each honors graduate will designate the student as an honor graduate of the college who will be recognized as graduating with Honors distinction. At the college commencement ceremony, each honors graduate will wear special regalia and have the title of his or her honors thesis and mentor’s name listed in the graduation program.

**STUDY ABROAD**

An educational experience outside the U.S. has become an integral component for today’s student in higher education. The ability to compete and perform in the global arena requires an understanding of world cultures, economic systems, religions, trends, governments and politics. Students in the Bumpers College are encouraged to engage in study abroad that will lead to lifelong partnerships, cultural awareness and understanding of the global dimensions of their majors. The college years provide the best opportunity for students to gain this understanding and experience through faculty-led group study tours; summer, semester or year-long study abroad; and international internships which closely relate to their career goals.

Bumpers College provides study abroad opportunities through its Global Studies Program, directed by Dr. Raymond W. Barclay Jr., who spends significant time abroad arranging individual programs of study. Although Global Studies Program often uses standard “off-the-shelf” study abroad programs, its hallmark is customizing study abroad experiences to meet the specific interests and goals of each Bumpers student. Almost 200 Bumpers students have had an international study experience since its inception in 1997, studying in 20 different countries, each earning academic credit relating to their major and global interests. The college anticipates a total of 40 to 50 Bumpers students participating in the Global Studies Program during each calendar year.

Study abroad can also lead to enrollment in AFLS 3313H Global Issues in Agricultural, Food and Life Sciences; or the minor in Global Agricultural, Food and Life Sciences for undergraduate students. Graduate opportunities are available for study in agricultural economics, agribusiness and related subjects via the UA’s Transatlantic Master of Science program at Ghent University, Belgium. Second language capability is helpful, but not required.

Bumpers students interested in a study abroad program or internships with full-time status usually can maintain their scholarships while abroad. Limited funding is available for travel grants through Bumpers and Honors colleges.

**COLLEGE ADMISSION REQUIREMENTS**

All students seeking admission to the Dale Bumpers College of Agricultural, Food and Life Sciences must meet the general requirements for admission to the University. Students transferring from other colleges at the University of Arkansas or from other institutions are expected to meet the same entrance standard.
COLLEGE ACADEMIC REQUIREMENTS

Residency
All students must have a minimum residence requirement of 36 weeks and 30 semester hours. The senior year must be completed in residence on campus unless a senior has already met the minimum residency requirement. This student will be permitted to earn not more than 12 of the last 30 hours in extension or correspondence courses or in residence at another accredited institution granting the baccalaureate degree. No more than six of these 12 hours may be correspondence courses.

University Graduation Requirements
1. A minimum of 124 semester hours.
2. University Core Requirements of 35 hours. See page 40 for a list of courses that meet the requirements. Check requirements for each major as some majors require specific core courses.
3. ENGL 2003 Advanced Composition unless exemption is gained as detailed in the University catalog. See page 41
4. A grade-point average of 2.00 (“C” average) on all work attempted at the University of Arkansas.
5. Less than 68 semester hours of lower-division course work (1000/2000 level) presented by transfer students for degree credit.
6. Less than 25 percent of all credit in “D” grades.

Bumpers College Graduation Requirements
1. For the degree of Bachelor of Science in Agricultural, Food and Life Sciences, students must complete a minimum of 30 semester hours within Bumpers College.
2. For the degree of Bachelor of Science in Human Environmental Sciences or Bachelor of Interior Design, students must complete a minimum of 30 hours within the School of Human Environmental Sciences at the University of Arkansas.
3. A minimum of 9 hours of Broadening electives (Bumpers College courses taken outside of departmental code).
4. A minimum of 6 hours of Communications courses to include COMM 1313 (3 hours) and a Communication Intensive Elective (3 hours) from an approved course list.
5. A minimum of 39 hours of courses at the 3000-level or above.
6. Departmental requirements of 33-59 hours. These hours are specific to each major and concentration. Bumpers College courses outside of the major may be included in departmental requirements.
7. A range of 6-32 elective hours are used to complete the degree requirements. These electives may be selected from the requirements for a minor.

Rules Applying to Course Work Used for Degree Credit
1. No credit will be given for duplicate coursework.
2. A maximum of six hours of internship and six hours of special problems may be counted for degree credit.
3. Elective courses used for degree credit may be chosen from any department in the University. These are subject to the approval of the academic adviser. Electives may be used to develop a minor.
4. Students are encouraged to join the University band, chorus, and judging teams, and to participate in debate, drama, athletics, etc. A total of six semester hours of elective credits in such activities may be counted toward a degree. The maximum elective credits in any one activity that may be counted toward a degree are as follows:
   Band and/or chorus  4 hours
   Drama and/or debate  4 hours
   Judging teams  4 hours
   Physical education activities  4 hours
5. Any course taken by correspondence, including Web-based courses, must be approved in advance in the dean’s office if the credits earned in the course are to be applied toward a degree. This rule applies regardless of the school from which the course is taken.
6. All transfer course work to be applied toward the degree must be an approved course listed in the transfer equivalency guide maintained by the Registrar’s office. For courses not listed in the guide, petitions can be submitted to the Dean’s office by the student’s academic adviser.
7. All study abroad courses must be approved in advance in the Dean’s office if the credits earned in the courses are to be applied toward a degree.

Requirements to Graduate with Honors
Students who have demonstrated exceptional academic performance in baccalaureate degree programs will be recognized at graduation by the honors designation of Cum Laude, Magna Cum Laude, or Summa Cum Laude. To earn these distinctions, a student must meet the following criteria:
1. At least one-half of the degree course work must have been completed at the University of Arkansas, Fayetteville.
2. Only the grade-point average on course work completed at the University of Arkansas, Fayetteville, will be considered.
3. For each of the three distinctive honors, the student must have the minimum grade-point average indicated.
   (a) Cum Laude: 3.50 to 3.74
   (b) Magna Cum Laude: 3.75 to 3.89
   (c) Summa Cum Laude: 3.90 to 4.00
4. Students may graduate with honors distinction without participating in the Honors Program.

Additional Requirements
Former students of the college who are readmitted after an absence of one year may be expected to meet the curriculum requirements in effect at the time of their readmission. Students should consult their academic adviser for degree planning before registering for classes.
Students interested in earning an additional bachelor’s degree should refer to the University requirements on page 40.

Grading System
The Dale Bumpers College of Agricultural, Food and Life Sciences utilizes a plus/minus grading system that assigns numerical values to 12 different grades. These values are used for courses when grade-point averages are calculated. See page 37 for the method of calculating grade-point averages. The 12-step grading system with assigned values is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.30</td>
</tr>
<tr>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
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<td>C-</td>
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<tr>
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<td>1.33</td>
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<tr>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>F</td>
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</tr>
</tbody>
</table>

University of Arkansas, Fayetteville
Departmental Majors

AGRICULTURAL AND EXTENSION EDUCATION (AEED)
Don R. Herring
Head of the Department
205 Agriculture Building
479-575-2035

• Professors Graham, Herring, Johnson, Wardlow
• Adjunct Professors Lyles, Baker
• Associate Professors Arthur, Scott
• Assistant Professor Miller
• Adjunct Assistant Professors Burch, Plafcan

Agricultural Education, Communication, And Technology (AECT)

The department of agricultural and extension education offers a degree program in agricultural education, communication and technology. Students with this major are in constant demand due to the rapidly changing educational needs of the agricultural and natural resources industries. Graduates with this degree have a broad knowledge of agricultural disciplines. They are prepared as agricultural technology transfer specialists to enter a variety of careers in formal and non-formal teaching roles in either the public or private sector as agricultural educators, Extension agents, industry-based trainers, information specialists, or technology-management specialists. Students in agricultural education, communication and technology may choose one of three areas of concentration listed below, or, with adviser’s approval, select courses from more than one concentration area.

Agricultural Education Concentration (AGED)

This area of concentration is designed for students who wish to receive initial teacher licensure to teach agricultural science in public schools.

Agricultural Systems Technology Mgmt. Concentration (ASTM)

Students planning a professional career related to technical operations and management in agricultural industry should enroll in this concentration. Graduates assume positions of leadership and responsibility in such areas as agricultural services and sales, agricultural management, agricultural production systems, product service, product testing, and service management. The program focuses on preparing students as problem solvers in the application, management and/or marketing of agricultural technology.

Agricultural Communications Concentration (ACOM)

This concentration is designed to produce graduates with both technical knowledge about the food and fiber industry and the communication skills needed to convey in an effective manner the story of agriculture to consumers, policy makers, and the public at large. Interpersonal and group communication, public relations, graphic art, video and television production, electronic communication, distance learning, video conferencing, and writing for the media are emphasized in this program.

Requirements for a Major in Agricultural Education, Communication and Technology (See page 40 for University Core and page 69 for B.S.A. requirements.)

English/Communication (12 – 15 hours)

English University Core Courses (6 hours)
ENGL 2003 Advanced Composition or Exemption Elective
– See page 41 for exemption information
COMM 1313 Fundamentals of Communication
AGED 3142/3141L Ag Communications with lab
Mathematics University Core Course (3 hours) – See page 40
Science University Core Courses and Departmental Requirements (20 hours)
University Core BIOL 1543/1541L Principles of Biology with lab
University Core CHEM 1074/1071L Fundamentals of Chemistry with lab - (Students may substitute CHEM 1103/1101L and CHEM 1123/1121L for CHEM 1074/1071L.)
CHEM 2613/2611L Organic Physio Chemistry with lab
BIOL 2013/2011L General Microbiology with lab or PHYS 1044/1040L Physics for Architects I with lab or higher level Science Elective (AGED Concentration) or Science or Math Elective (3 hours.) (ACOM & ASTM Concentration)
Fine Arts/Humanities University Core Courses (6 hours)
AGED Concentration
WLIT 1113 World Literature I or WLIT 1123 World Literature II 3 hours. (Select from sections a, b, or d) – See page 40
ACOM & ASTM Concentration
6 hours. (Select in two categories from “State Minimum Humanities Core” (sections a, b, c, or d) – See page 40
US History University Core Course (3 hours)
Social Sciences University Core Courses (9 hours)
University Core AGEC 1103 Principles of Agricultural Microeconomics or AGEC 2103 Principles of Agricultural Macroeconomics
University Core PSYC 2003 General Psychology
Select 3 hours from other listed fields of study – See page 40
AECT Core Requirements: All Concentrations
AFLS 1011 Freshman Orientation
AGED 1001 Orientation Agri/Ext Education
CSES/HORT 1203 Intro to Plant Sciences
ANSC 1032/1051 Intro to Plant Sciences / Intro to Livestock Industry
CSES 2013 Pest Management
CSES 2203 Soil Science
CSES 2201L Soil Science lab or CSES 355V Soil Profile
AGME 1613/1611L Fundamentals of Agricultural Systems Technology with lab
AGME 4003 Issues in Agriculture
AECT Major Requirements for AGED Concentration (29-32 hours)
AECT Core Requirements and
HORT ELECTIVE (3 hours)
AGME 4011 Senior Seminar
AGED 475V Internship (3-6 hours)
Mechanical Technology Courses (8 hours)
Choose from the following AGME courses:
AGME 2123/2120L Metals & Welding with lab
AGME 3042 Ag Construction Technology
AGME 3102/3101L Small Power Units/Turf Equipment with lab
AGME 3153 Surveying Agri & Forestry
AGME 3173/3170L Electricity in Agriculture with lab
AGME 4203/4200L Mechanized Systems Management with lab
AGME 4973/4970L Irrigation with lab
Education Courses (27 hours)
AGED 1122 Agri Youth Organizations
AGED 3133/3130L Methods in Agri Education with lab
AGED 4012 Program Planning
AGED 4632 Teaching Diverse Populations
### Agile Education, Communication and Technology Nine-Semester Degree Program

Students wishing to follow the degree plan in Agricultural Education, Communication and Technology should see page 42 in the Academic Regulations chapter for university requirements of the program. The Agricultural Education, Communication and Technology major has three concentrations: Agricultural Education, Agricultural Systems Technology Management, and Agricultural Communications. Specific courses for all concentrations are available in Section 2 of the Catalog of Studies, available at http://catalogofstudies.uark.edu.

#### Fall Semester 1
- 1 AFLS 1011 Freshman Orientation
- 1 AGED 1001 Orientation to Agricultural/Extension Education
- 2 AGED 1122 Ag Youth Organizations
- 3 AGME 1613/1611L Fundamentals of Agricultural Systems Technology Lecture/Lab
- 3 AGME 2903 Applications of Microcomputers
- 1 ANSC 1032 Introductory Animal Sciences
- 1 ANSC 1051 Introduction to the Livestock Industry
- 17 total hours

#### Spring Semester 1
- 4 BIOL 1543/1541L Principles of Biology Lecture/Lab
- 3 CSES/HORT 1203 Introduction to Plant Sciences
- 3 University Core ENGL 1023 Composition II
- 3 University Core MATH 1203 College Algebra (or higher math)
- 3 PSYC 2003 General Psychology
- 16 total hours

#### Fall Semester 2
- 3 AGEC 1103 Principles of Ag Microeconomics or AGEC 2103 Principles of Ag Macroeconomics
- 3 COMM 1313 Fundamentals of Communication
- 5 CHEM 1074/1071L Fundamentals of Chemistry Lecture/Lab
- 3 ENGL 2003 Advanced Composition or Exemption Elective (Select Upper Division course)
- 3 Discipline Related Elective
- 17 total hours

#### Spring Semester 2
- 4 CHEM 2613/2611L Organic Physiological Chemistry Lecture/Lab
- 3 CSES 2013 Pest Management
- 3 History University Core Elective
- 3 Science or Math Electives
- 3 Fine Arts/Humanities University Core Elective
- 3 Concentration Electives
- 16 total hours

#### Fall Semester 3
- 3 AGED 3142/3141L Ag Communications Lecture/Lab
- 3 BIOL 2013/2011L General Microbiology Lecture/Lab or PHYS 1044/1044L Phsyic for Architects I Lecture/Lab
- 3 CSES 2203 Soil Science
- 1 CSES 2201L Soil Science Lab or CSES 355V Soil Profile Description
- 3 Fine Arts/Humanities University Core Elective
- 3 Concentration Elective
- 17 total hours

#### Spring Semester 3
- 3 AGED 3153 Leadership Development in Agriculture (ACOM & ASTM concentration or elective for AGEO)
- 3 Social Science University Core Elective
- 3 Science or Math Electives
- 3 Fine Arts/Humanities Core (WLIT 1113 for AGED)
- 3-5 Concentration Electives

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**AGED 4843 Methods in Ag Labs**
**AGME 2903 AGHE Appl Microcomputers or ETEC 2001/2002L Computers with lab**
**CIED 1002 Intro to Education and AGED 1031 Early Field Experience**
**CIED 3023 Survey of Exceptionalities**
**CIED 3033 Classroom Learning Theory**
**HLSC 3633 First Aid/First Responder**

**AECT Major Requirements for ACOM & ASTM Concentrations**
(32 hours)
**AECT Core Requirements and**
**AGED 3153 Leadership Development in Agriculture**
**AGME 2903 AGHE Appl Microcomputers**
**AGME 4011 Senior Seminar**
**EXED 475V Internship (3 hours)**

**Agricultural Communications (ACOM) (20-23 hours)**
**COMM 2303 Public Speaking**
**JOUR 1023 Media & Society**
**JOUR 1033/1033L Fundamentals of Journalism with lab**
**JOUR 2013 News Reporting I**
**AGED 3942 Professional Development in Ag Comm**
**AGED 4243 Pub Prod in Agriculture**

**Select 3-6 hours from the following:**
**AGED 4143 Electronic Communication in Agriculture**
**COMM 3303 Small Group Communication**
**COMM 3703 Organizational Communication**
**JOUR 3023/3023L News Reporting II with lab**
**JOUR 2032/2031L Broadcast News Reporting I with lab**
**JOUR 2332/2331L Photo Journalism I with lab**
**JOUR 3072/3071L Broadcast News Reporting II with lab**

**Agricultural Systems Technology Management (ASTM) (23-30 hours)**
**AGEC 2303 Intro to Agribusiness**
**AGEC 3403 Farm Business Management**
**AGEC 4313 Agribusiness Management**
**AGME 3102/3101L Small Power Units/Turf Equipment with lab**
**AGME 3173/3170L Electricity in Agriculture with lab**

**Select 8-15 hours from the following:**
**AGME 2123/2120L Metals & Welding with lab**
**AGME 4203/4200L Mechanized Systems Management with lab**
**AGME 402V Special Topics Agri Mech**
**PHYS 220V Intro to Electronics I**
**GEOG 4523 Computer Mapping**
**GEOG 4543 Geographic Info Systems**
**AGME 3102/3101L Small Power Units/Turf Equipment with lab**
**AGME 3173/3170L Electricity in Agriculture with lab**

**Select 3-6 hours from the following:**
**AGME 2123/2120L Metals & Welding with lab**
**AGME 4203/4200L Mechanized Systems Management with lab**
**AGME 402V Special Topics Agri Mech**
**PHYS 220V Intro to Electronics I**
**GEOG 4523 Computer Mapping**
**GEOG 4543 Geographic Info Systems**
**PHYS 320V Intro to Electronics II**
**GEOG 4593 Intro to GPS**

**Electives:**
**AGED (3-9 hours)**
**ACOM (16-19 hours)**
**ASTM (9-16 hours)**

**Total Hours Required (AGED) 126-129 hours (ACOM & ASTM) 124-125 hours**
Summer Semester 3
3 EXED 475V Internship (ACOM & ASTM Concentration) or
2 AGED 475V Internship (AGED Concentration for Teacher Licensure)
2-3 Total Hours

Fall Semester 4
3 AGED 4003 Issues in Agriculture
9-12 Concentration Elective
12-15 Total Hours (15 Total Hours for AGED)

Spring Semester 4
1 AGME 4011 Senior Seminar
7-13 Concentration Electives
4 AGED 475V Internship (AGED Concentration for teacher licensure)
12-14 Total Hours

124 Total Hours (ASTM & ACOM)
127 Total Hours (AGED)

Minor in Agricultural Education (AGED-M)
The Agricultural Education Minor will consist of 22 hours to include the following:
CIED 1002 Introduction to Education
AGED 1031 Introduction to Early Field Experience
ETEC 2002L/2001 Educational Technology with lab or AGME 2903 Applications of Microcomputers
CIED 3023 Survey of Exceptionalities
CIED 3033 Classroom Learning Theory
AGED 1122 Agricultural Youth Organizations
AGED 3133 Methods in Agricultural Education
AGED 4843 Methods in Agricultural Laboratories
AGED 4012 Program Development

A student planning to minor in Agricultural Education must notify the program adviser.

Minor in Agricultural Systems Technology Management (ASTM-M)
The Agricultural Systems Technology Management Minor will consist of 18 hours to include AGME 1613 and AGME 2903 and 12 hours selected from the following:
AGME 1611L Fundamentals of Agricultural Systems Technology lab
AGME 2123 Metals and Welding
AGME 3153 Surveying in Agriculture and Forestry
AGME 3102/3101L Small Power Units/Turf Equipment with lab
AGME 3173 Electricity in Agriculture
AGME 4203 Mechanized Systems Management
AGME 4973 Irrigation
ENSC 3263 Environmental Soil and Water Conservation

A student planning to minor in Agricultural Systems Technology Management must notify the program adviser for consultation and more detailed information.

Minor in Journalism (JOUR-M)
The Journalism Minor allows for a combination of training in journalism with a specialization in agriculture or human environmental sciences. Its purpose is to prepare the student for employment with firms and institutions that produce agricultural or human environmental sciences publications or employ public relations personnel.

Students interested in a journalism minor may choose from one of three areas:

Print Journalism (18 semester hours)
JOUR 1023 Media and Society
JOUR 1033 Fundamentals of Journalism
JOUR 2013 News Reporting I
JOUR 3013 Editing
JOUR 3123 Feature Writing
JOUR 3633 Media Law

Broadcast Journalism (18 semester hours)
JOUR 1023 Media and Society
JOUR 1033 Fundamentals of Journalism
JOUR 2032/2031L Broadcast News Reporting I with lab
JOUR 3072/3071L Broadcast News Reporting II with lab
JOUR 3633 Media Law
JOUR 4863/4860L Television News Reports I with lab

Print and Broadcast Journalism (18 semester hours)
JOUR 1023 Media and Society
JOUR 1033 Fundamentals of Journalism
JOUR 2013 News Reporting I
JOUR 2032/2031L Broadcast News Reporting I with lab
JOUR 3072/3071L Broadcast News Reporting II with lab
JOUR 3633 Media Law

A student interested in a Journalism minor must notify his or her major adviser for detailed information. The minor is coordinated by the department of Agricultural and Extension Education in consultation with the department of Journalism.

See Pages 313, 352, and 313 for Agricultural and Extension Education Courses (AGED, EXED, or AGME).

Agricultural Economics and Agribusiness (AEAB)
M. J. Cochran
Head of the Department
217 Agriculture Building
479-575-2256

- University Professor LaFerney
- Professors Cochran, Dixon, Goodwin, Redfern, Wailes
- Adjunct Professors Millager, Miller
- Associate Professors Ahrendsen, McKenzie, Parsch, Popp (J.), Popp (M.), Thomsen
- Assistant Professors Rainey, Watkins
- Adjunct Assistant Professors Bryant, Doekson, Robinson, Settlage
- Adjunct Instructor Hipp

The agricultural business degree program provides education suited to career opportunities in farm management, agricultural business management, and agricultural marketing in both the domestic and international areas.

Managers of farms and agricultural businesses are continually required to make organizational and operational decisions. The basic skills and knowledge needed for making sound decisions are provided by the agricultural business curriculum. Students may elect to specialize in areas compatible with their personal objectives, depending upon the extent of accounting and business orientation desired.

Students educated in agricultural business are in demand for positions in agricultural industries, farm operation, marketing agencies, agricultural service organizations, state and federal agencies, and numerous other positions. For those who go on to graduate school, teaching and research positions are available with land grant colleges as well as with other institutions. Three concentrations are available to meet career objectives:
A. Agricultural Business Management and Marketing (ABMM) 
B. Pre-Law, for students preparing to attend law school (PRLW) 
C. Agricultural Economics, which emphasizes quantitative and analytical skills to prepare students for graduate school (AGEC).

The following sections detail requirements for Concentration A (ABMM). Requirements for Concentrations B and C are listed at the end of these sections, and more information is available in the Agricultural Economics and Agribusiness departmental office.

Agricultural Business Management and Marketing Degree (ABMM) Concentration Requirements

1. English/Communications (12-15 hours)
   - English University Core Courses (6 hours)
     - COMM 1313 Fundamentals of Communication
     - ENGL 2003 Advanced Composition or Exemption Elective – See page 41 for exemption information
   - Communication Intensive Elective: AGED 3142/3141L or ENGL 3053 or COMM 2303 or COMM 2373 or COMM 3303, or COMM 3383

2. Mathematics University Core Course and Departmental Requirements (9 hours)
   - University Core MATH 1203 College Algebra
   - MATH 2053 Finite Mathematics
   - AGEC 2403 Quantitative Tools for Agribusiness or WCOB 1033 Data Analysis and Interpretation

3. Science University Core Courses (8 hours) - See page 40
   - Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40

4. Social Sciences University Core Courses (9 hours) Select from 3 sets of courses
   - PSYC 2003 General Psychology or SOCI 2013 General Sociology or RSOC 2603 Rural Sociology
   - AGEC 1103 Principles of Agri Microeconomics or ECON 2023 Principles of Microeconomics
   - AGEC 2103 Principles of Agri Macroeconomics or ECON 2013 Principles of Macroeconomics

Concentration A: AEAB Major Requirements for ABMM

- Departmental Core 18 hours
  - AGEC 2303 Introduction to Agribusiness
  - AGEC 3303 Food & Agri Marketing
  - AGEC 3403 Farm Business Management
  - AGEC 3503 Agriculture Law
  - AGEC 4143 Agriculture Finance
  - AGEC 4163 Domestic & International Ag Policy

- Specialization 27 hours
  - AGEC 2143 Agribusiness Financial Records or WCOB 1023 Business Foundations
  - AGEC 3373 Futures & Options Markets
  - AGEC 3313 Agribusiness Sales
  - AGEC 3413 Principles of Environmental Economics
  - AGEC 4113 Ag Prices & Forecasting (Sp, odd years) or AGEC 4373 Advanced Price Risk Management
  - AGEC 4313 Agribusiness Management or AGEC 4323 Agribusiness Entrepreneurship or Specialization Elective

- And 9 hours from alpha codes AGEC, MATH, STAT, or courses in the Walton College of Business or the AFLS College.
  - Bumpers College Electives 9 hours.
  - General Electives 20 hours.
  - 124 Total Hours Required.

Agricultural Business Management and Marketing (ABMM) Concentration Eight-Semester Degree Program

Students wishing to follow the degree plan in Agricultural Economics and Agribusiness should see page 42 in the Academic Regulations chapter for university requirements of the program. The Agricultural Economics and Agribusiness major has three concentrations: Agricultural Business Management and Marketing, Pre-Law, and Agricultural Economics. Specific courses for all concentrations are available in Section 2 of the Catalog of Studies, available at http://catalogofstudies.uark.edu.

Fall Semester 1

- 3 University Core ENGL 1013 Composition I
- 3 University Core MATH 1203 College Algebra
- 3 History University Core Elective
- 3 AGEC 2103 Principles of Ag Macroeconomics
- 3 AGEC 2903 or Bumpers College Broadening Elective
- 0 WCOB 1120 Computer Competency Requirement (if not AGME 2903 Application of Microcomputers)
- 15 Total Hours

Spring Semester 1

- 3 University Core ENGL 1023 Composition II
- 3 COMM 1313 Communication
- 3 AGEC 1103 Principles of Ag Microeconomics
- 3 MATH 2053 Finite Math
- 4 Science University Core Elective
- 16 Total Hours

Fall Semester 2

- 3 Social Science University Core Elective
- 3 Fine Arts/Humanities University Core Elective
- 3 AGEC 3303 Food and Agri Marketing
- 3 AGEC 2143 Agribusiness Financial Records or WCOB 1023 Business Foundations
- 3 General Elective
- 15 Total Hours

Spring Semester 2

- 3 AGEC 2403 Quantitative Tools for Agribusiness or WCOB 1033 Business Foundations
- 4 Science University Core Elective
- 3 AGEC 2303 Intro to Agribusiness
- 3 Bumpers College Broadening Elective
- 3 General Elective
- 16 Total Hours

Fall Semester 3

- 3 ENGL 2003 Advanced Composition or Exemption Elective
- 3 Communication Intensive Elective
- 3 AGEC 3403 Farm Business Management
- 3 AGEC 4143 Agriculture Finance
- 3 Specialization Elective
- 15 Total Hours

Spring Semester 3

- 3 AGEC 3503 Agriculture Law
- 3 AGEC 3413 Principles of Environmental Economics
- 3 AGEC 3313 Agribusiness Sales
- 3 AGEC 3373 Futures & Options Markets
- 3 General Elective
- 18 Total Hours

Fall Semester 4

- 3 AGEC 4613 Domestic & International Ag Policy
3 AGEC 4313 Agribusiness Management or Specialization Elective
3 Specialization Elective
6 General Electives
15 Total Hours

Spring Semester 4
3 AGEC 4113 Ag Prices and Forecasting (odd years) or AGEC 4373 Advanced Price Risk Management
3 AGEC 4323 Agribusiness Entrepreneurship or Specialization Elective
3 Bumpers College Broadening Elective
5 General Electives
14 Total Hours

124 Total Hours

Concentration B: AEAB Major Requirements for PRLW
Requirements for this degree program are identical to the ABMM concentration except for specialization electives. The approved list of specialization courses, check sheet, and degree program for the PRLW concentration are available in the Agricultural Economics and Agribusiness departmental office.

3/3 Program
Exceptional students in the Pre-Law concentration may enroll in the Law School in their fourth year provided that the following requirements have been met:
1. completed all University, college, and department core requirements for the pre-law concentration;
2. completed 12 hours in the specialization list for pre-law;
3. a cumulative grade-point average in all college or University course work of at least 3.50 without grade renewal;
4. an LSAT score of at least 159. A student may substitute law school course work for the remaining total hours required for the bachelor’s degree in agricultural business.

It is a requirement of the Law School’s accrediting standards that no student be admitted to Law School until they have completed at least three-fourths of the work necessary for the baccalaureate degree. The requirements embodied in the 3/3 program satisfy this requirement.

Concentration C: AEAB Major Requirements for AGEC
Requirements for this degree program are similar to the ABMM concentration except for math/statistics and specialization electives. The approved list of courses, check sheet, and degree program for the AGEC concentration are available in the Agricultural Economics and Agribusiness departmental office.

Minor in Global Agricultural, Food and Life Sciences (AFLS-M):
The Bumpers College offers a minor in global agricultural, food and life sciences to provide students throughout the college opportunities to complement their major field of study with an international component. It is designed to provide learning skills and international experiences leading to greater understanding of global issues in agriculture, human and environmental sciences and the ability to participate effectively.

This minor will consist of 18 semester hours to include AFLS 2003 Introduction to Global Agricultural, Food and Life Sciences; 3 to 6 hours study abroad;
AGEC 4163 Agricultural and Rural Development or AGEC 4613 Domestic and International Agricultural Policy or AGEC 402V (international topic approved by student’s adviser and International Agriculture Program (IAP) director); 6 hours to be selected from the following:
ANTH 1023 Introduction to Cultural Anthropology
ANTH 3123 The Anthropology of Religion
ANTH 4253 Peoples and Cultures of World Regions
FIIR 2813 Introduction to International Relations
FLAN
GEOG 2023 Geography of Europe
GEOG 4783 Geography of Europe
GEOG 4033 Geography of the Middle East
GEOG 4243 Political Geography
GEOG 4793 Geography of the Middle East
GEOG 4013 Latin America
HIST 3043 History of the Modern Middle East
HIST 3203 Colonial Latin America
HIST 4103 Europe in the 19th Century
PLSC 2813 Introduction to International Relations
PLSC 3803 International Organization
PLSC 3813 International Law
And 3 hours of elective from the following (for students only taking 3 hours study abroad):
AGEC 4163 Agricultural and Rural Development
AGEC 4613 Domestic and International Agricultural Policy
AGEC 402V Special Topics
COMM 4343 Intercultural Communication
ECOM 4633 International Trade Policy
ECOM 4643 International Monetary Policy
ECON 4653 Global Competition and Strategy
FINN 3703 International finance
PLSC 3853 American Foreign Policy
or other courses with an international focus.

A student interested in a Global Agriculture minor must notify his or her major adviser for detailed information. The minor is coordinated by Dr. Raymond W. Barclay, Jr. of International Agriculture Programs, HOTZ Hall.

SEE PAGE 312 FOR AGRICULTURAL ECONOMICS AND AGRIBUSINESS (AGEC) COURSES.

ANIMAL SCIENCE (ANSC)
Keith Lusby
Head of the Department
B114 Dale Bumpers College of Agricultural, Food, and Life Sciences Building
479-575-4351

• University Professor Yazwinski
• Professors Brown (A.H.) Coffey, Jennings, Kellogg, Lusby, Maxwell, McNew, Pennington, Roeder, Rorie, Rosenkrans, Troxel
• Adjunct Professors Brown (M.A.), Baird, Burke, Chewning, Coblentz, Friesen, Looper, Nugent, Pohlman
• Associate Professors Apple, Gunter, Johnson, Kegley, Kreider, Roeder, Rorie, Rosenkrans, Troxel
• Adjunct Assistant Professors Gadberry, Roeder (M.)
• Instructor Kutz

The animal science major is designed to provide the scientific and technical education to prepare students for positions of leadership and responsibility. Students gain valuable experience pertaining to the production of beef and dairy cattle, swine, horses, sheep, and companion animals. In addition, extensive study is offered in the specialized areas of animal health, breeding and genetics, meat science, nutrition, and physiology.

Students majoring in animal science are prepared for a variety of careers. Pre-veterinary, pre-medical, and pre-professional course requirements may be fulfilled while meeting degree requirements. Specific career opportunities include positions and services related to the production of beef and dairy cattle, swine, horses, sheep, and companion animals. Students majoring in animal science prepare for a variety of careers. Pre-veterinary, pre-medical, and pre-professional course requirements may be fulfilled while meeting degree requirements. Specific career opportunities include positions and services related to the production, merchandising, processing and distribution of meat, milk, and related products. Additional opportunities include field persons, farm and herd managers, and other agribusiness-related positions. With additional academic training, animal science majors may become extension livestock specialists, nutritionists, geneticists, and physiologists.

Students should consult an animal science adviser for specific course selections in the elective areas. With appropriate advising, students have an opportunity to complete at least one minor within the 124-hour degree program.

Animal Science Degree Requirements
English/Communications (12-15 hours)
English University Core Courses (6 hours)
ENGL 2003 Advanced Composition or Exemption Elective
COMM 1313 Fundamentals of Communication
Communication Intensive Elective from an approved course list.
(See adviser)

Mathematics University Core Course (3 hours) – See page 40
Science University Core Courses and Departmental Requirements (17 hours)
University Core BIOL 1543/1541L Principles of Biology with lab

Or any upper division course in AEED, AGEC, AGME, AGST, BIOL, CHEM, CSES, FDSC, POSC, WCOB

General Electives (20-23 hours)

Animal Science Eight-Semester Degree Program
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
1 ANSC 1001L Intro to Animal Science Lab
2 ANSC 1032 Intro to Animal Sciences
Minor in Animal Science (ANSC-M)  
A minor in Animal Science prepares students for jobs in the animal industries and consists of 20 hours to include
- ANSC 1032/1001L Introductory to Animal Sciences with lab
- ANSC 1041 Introduction to Companion Animal Industry or ANSC 1051 Introduction to the Livestock Industry
- ANSC 2252L Introduction to Livestock and Meat Evaluation
- ANSC 3133 Animal Breeding and Genetics
- ANSC 3143 Principles of Animal Nutrition
- ANSC 3433 Fundamentals of Reproductive Physiology
and 5 hours from the following production and management courses:
  - ANSC 4252 Cow-Calf Management
  - ANSC 4263 Swine Production
  - ANSC 4272 Sheep Production
  - ANSC 4283 Horse Production
  - ANSC 4452 Milk Production
  - ANSC 4652 Stocker-Feedlot Cattle Management
A student planning to minor in animal science must consult with an animal science adviser.

Minor in Equine Science (EQSC-M)  
A minor in Equine Science prepares students for jobs in the equine industry and is available to all students. A student planning to minor in Equine Science must notify the program adviser for consultation and more detailed information.

The minor consists of 20 hours to include
- ANSC 1032 Introductory Animal Sciences
- ANSC 1041 Introduction to Companion Animal Industry
- ANSC 2003 Introduction to Equine Industry
- ANSC 3723 Horse and Livestock Merchandising
- ANSC 3822 Equine Law
- ANSC 3433 Fundamentals of Reproductive Physiology
- ANSC 4283 Horse Production
and 3 hours from any of the following courses:
  - ANSC 401V Internship in Equine Sciences
  - ANSC 3143 Principles of Animal Nutrition
  - ANSC 3133 Animal Breeding and Genetics
  - ANSC 3333 Diseases of Livestock
  - ANSC 3003 Applied Animal Parasitology
  - ANSC 2213 Behavior of Domestic Animals

SEE PAGE 314 FOR ANIMAL SCIENCE (ANSC) COURSES.

BIOTHERAL ENGINEERING (BENG)  
Lalit Verma  
Head of the Department  
203 Engineering Hall  
479-575-2351
- • Professors Griffis, Loewer, Verma  
- • Adjunct Professor Clausen  
- • Associate Professors Carrier, Costello, Li, Vories  
- • Adjunct Associate Professors Beitle, Deaton  
- • Assistant Professors Bajwa, Chaubey, Kim, Matlock, Osborn  
- • Adjunct Assistant Professors Haggard, Howell, Wimberly, Yang  
- • Research Professor Gardisser  
- • Research Associate Professors Huitink, Tacker, VanDevender  
- • Research Assistant Professor Murphy  

The curriculum leading to the professional degree in biological engineering is under the joint supervision of the deans of the Dale Bumpers College of Agricultural, Food and Life Sciences and the College of Engineering. The engineering degree, Bachelor of Science
in Biological Engineering (B.S.B.E.), is conferred by the College of Engineering and is described on page 260. Students who wish to receive this degree enroll in the College of Engineering.

SEE PAGE 321 FOR BIOLOGICAL ENGINEERING (BENG) COURSES.

CROP, SOIL, AND ENVIRONMENTAL SCIENCES (CSES)

Robert K. Bacon
Interim Head of the Department
115 Plant Science Building
479-575-2354

- Distinguished Professors Boyd, Oosterhuis
- University Professors Oliver, Wolf
- Professors Bacon, Bourland, Counce, Daniel, Gbur, Longer, Miller, Mauromoustakos, Moldenhauer, Norman, Phillips, Purcell, Robertson, Rutledge, Smith, Stewart, West, Wilson
- Visiting Professor Gealy
- Adjunct Professors Cress, Rutger
- Associate Professors Byre, Burgos, Chen, McConnell, Michaels, Slaton, Scott
- Visiting Associate Professor Moore
- Research Associate Professor Mattice
- Assistant Professors Espinoza, Kelley, Savin, Sheng, Srivastava, Tingle
- Adjunct Assistant Professor Skulman
- Research Assistant Professors Anders, Gibbons, Mozaffari, Stephenson, Widick

Courses in the Department of Crop, Soil, and Environmental Sciences provide fundamental and applied studies in two majors: Crop Management (CPMG) and Environmental, Soil, and Water Science (ESWS). Areas studied within the Crop Management major include plant breeding and genetics, crop and forage production, pest management (weeds, insects, and plant diseases), and soil fertility. The Environmental, Soil, and Water Science major includes courses in areas such as environmental science, water quality, soil science, soil and water conservation, and the sustainable productivity of natural resources.

Opportunities for employment and post-graduate study are numerous for graduates of the Department of Crop, Soil, and Environmental Sciences. Crop Management graduates become involved in crop production or find employment in public agencies providing support services for agriculture (e.g., Extension Service, State Plant Board, Natural Resources Conservation Service), or as consultants serving production agriculture, in the agrichemical and seed industries, and in agricultural research programs.

The crop management major includes plant breeding and genetics, crop and forage production, pest management (weeds, insects, and plant diseases), and soil fertility.

Requirements for a major in Crop Management:

- English/Communications (15 hours)
  - English University Core Courses (6 hours)
  - ENGL 2003 Advanced Composition or Exemption Course
  - ENGL 3053 Technical & Report Writing – See page 41 for exemption information
- Mathematics University Core Course and Departmental Requirements
  - MATH 1203 College Algebra
  - CSCE 2003 Introductory Microcomputers and Data Communications
  - MATH 2013 Modern Business Mathematics

CROP MANAGEMENT (CPMG)

Dr. David E. Longer
CPMG Coordinator
115 Plant Science Bldg.
479-575-2354

Opportunities for employment and post-graduate study are numerous for graduates of the Department of Crop, Soil, and Environmental Sciences. Crop Management graduates become involved in crop production or find employment in public agencies providing support services for agriculture (e.g., Extension Service, State Plant Board, Natural Resources Conservation Service), or as consultants serving production agriculture, in the agrichemical and seed industries, and in agricultural research programs.

The crop management major includes plant breeding and genetics, crop and forage production, pest management (weeds, insects, and plant diseases), and soil fertility.

Requirements for a major in Crop Management:

- English/Communications (15 hours)
  - English University Core Courses (6 hours)
  - ENGL 2003 Advanced Composition or Exemption Course
  - ENGL 3053 Technical & Report Writing – See page 41 for exemption information
- Mathematics University Core Course and Departmental Requirements
  - MATH 1203 College Algebra
  - CSCE 2003 Introductory Microcomputers and Data Communications
  - MATH 2013 Modern Business Mathematics

CROP MANAGEMENT Major Requirements (27 hours)

General Agronomy (these 19 hours are required)

- CSES 1011 Introduction to Crop, Soil, and Environmental Sciences
- CSES 2103 Crop Science
- CSES 2101L Crop Science Lab
- CSES 2203 Soil Science
- CSES 2201L Soil Science Laboratory
- CSES 4013 Advanced Crop Science
- CSES 4224//4220L Soil Fertility w/Lab
Crop Management Nine-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 College Algebra
4 BIOL 1543/1541L Principles of Biology with lab
3 History University Core Elective
1 CSES 1011 Introduction to CSES
14 semester hours

Spring Semester 1
4 CSES 2103/2101L Crop Science with lab
4 BIOL 1613/1611L Plant Biology with lab
3 ENGL 1023 Composition II
3 COMM 1313 Fundamentals of Communication
3 AGEC 1103 Agricultural Microeconomics - Required
17 semester hours

Fall Semester 2
4 CHEM 1103/1101L Chemistry I with lab

Spring Semester 2
3 ENGL 2003 Advanced Composition or if exempt ENGL 3053 Technical & Report Writing – See page 41
3 Social Science University Core Elective
3 Fine Arts/Humanities University Core Elective
2-3 Select one (1) course from Group A above
15-16 semester hours

Fall Semester 3
4 CHEM 1123/1121L Chemistry II with lab
3 AGME 2903 Applications of Microcomputers or CSCE 1003 Survey of Computer Concepts or AGST 4023 Principles of Experimentation or STAT 2303 Biostatistics (students in Ag Business minor should not choose CSCE 1003)
3 Social Science University Core Elective
3 Fine Arts/Humanities University Core Elective
2-3 Select one (1) course from Group A above
15-16 semester hours

Spring Semester 3
3-4 BIOL 2323 General Genetics or BIOL 4304 or ANSC/POSC 3123
4 CHEM 2613/2611L Organic Physiological Chemistry with lab
3 Select one (1) course from Group C or Group D for required minor
3 General Elective
13-14 semester hours

Summer Semester
3 CSES 462V Internship or CSES 400V Special Problems

Fall Semester 4
3 CSES 3023 CSES Colloquium
3 CSES 4133 Weed Identification, Morphology & Ecology
4 CSES 4224/4220L Soil Fertility with lab
3 Select one (1) course from Group C or Group D for required minor
3 General Elective
6 General Electives
1-3 General Elective (number of hours depends on number of hours needed to meet minimum of 124 total semester hours to graduate)
13-15 semester hours

124 Total Hours
Opportunities for employment and post-graduate study are numerous for graduates of the Department of Crop, Soil, and Environmental Sciences. Environmental, Soil, and Water Science graduates find jobs with environmental consulting companies, environmental education organizations, state agencies (e.g., Extension Service, Department of Environmental Quality, Health Department), federal agencies (e.g., Environmental Protection Agency, Natural Resources Conservation Service), municipalities and local environmental services (e.g., waste management and recycling, water and wastewater treatment facilities, parks and tourism departments), and a wide variety of private businesses.

The Environmental, Soil, and Water Science major includes courses in areas such as environmental science, water quality, soil science, soil and water conservation, and the sustainable productivity of natural resources.

**ESWS Major Requirements (29-31 hours)**

**Environmental Science Core (11 hours, required)**

- CSES 1011 Introduction to CSES
- ENSC 1003 Environmental Science

**Select second Soil Science core (3-4 hours)**

- CSES 2203 Soil Science
- CSES/ENSC 2210L Soil Science Lab
- ENSC 3003 Introduction to Water Science

**Select second Water Science core (3-4 hours)**

- ENSC 4023/4020L Water Quality w/Lab
- GEOG 3333 Oceanography
- GEOL 4031/4030L Hydrogeology w/Lab
- BIOL 4814/4810L Limnology w/Lab

**Natural Resources Core (Select 12 credit hours from at least 2 of the following 3 groups)**

- Methods/Techniques in Environmental Science
- CSES 355V Soil Profile Descriptions
- CSES/BENG 4803 Precision Agriculture
- AGME 3153 Surveying in Agriculture and Forestry
- ENSC 3603 GIS for Environmental Science
- ENSC 4034/4030L Analysis of Environmental Contaminants with lab

**Environmental & Society**

- AGEC 3413 Principles of Environmental Economics
- AGEC 3503 Agricultural Law
- ENSC 3933 Environmental Ethics
- RSOC/SOCI 4603 Environmental Sociology

**Environmental Management**

- CSES 2013 Pest Management
- ENSC 3103 Plants & Environmental Restoration
- ENSC 3263/3260L Env. Soil & Water Conservation w/Lab

**General Electives (18-24 hours)**

- 124 Total hours required

Environmental science courses transferred from Northwest Arkansas Community College, University of Arkansas at Fort Smith, and the University of Arkansas at Little Rock can be used to fulfill selected ESWS requirements. Consult an academic adviser to verify transfer applicability.

**Environmental, Soil, and Water Science Eight-Semester Degree Program**

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

**Fall Semester 1**

- 3 ENGL 1013 Composition I
- 3 ENSC 1003 Environmental Science
- 1 CSES 1011 Introduction to CSES
- 3 History University Core Elective
- 3 Social Sciences University Core Elective
- 3 Fine Arts/Humanities University Core Elective

16 semester hours

**Spring Semester 1**

- 3 ENGL 1023 Composition II
- 4 Science University Core – BIOL 1543/1541L Principles of Biology w/lab
- 3-4 CSES 1203 Introduction to Plant Sciences or BIOL 1613/1611 Plant Biology w/lab
- 3 Social Sciences University Core Elective
- 3 General Elective (Rec- MATH 1203 as pre-requisite for CHEM 1103 and MATH 2043 or could apply elective toward a minor)

16-17 semester hours

**Fall Semester 2**

- 3 ENGL 2003 Advanced Composition or Exemption Elective
- 3 ENSC 3003 Introduction to Water Science
- 4 Science University Core – CHEM 1103/1101L Chemistry I with lab

University of Arkansas, Fayetteville
3 COMM 1313 Fundamentals of Communications
3 MATH 2043 Survey of Calculus
16 semester hours

**Spring Semester 2**
4 CHEM 1123/1121L Chemistry II w/lab
3 Fine Arts/Humanities University Core Elective
3 Social Sciences University Core Elective
4 GEOL 1113/1111L Geology w/lab
3 General Elective (Rec-MATH 1213 as pre-requisite for PHYS 2013 or could apply elective toward a minor)
17 semester hours

**Fall Semester 3**
4 CSES 2203/2201L Soil Science w/lab
4 PHYS 2013/2011L College Physics I w/lab
3 Water Science or Natural Resources Core
6 General Electives as AFLS Broadening Electives (Could apply toward a minor)
17 semester hours

**Spring Semester 3**
4 BIOL 2013/2011L General Microbiology w/lab
4 CHEM 2613/2611L Organic Physiological Chemistry w/lab
3-4 Natural Resources Core
3-4 Water Science or Soil Science Core (For Water Science: Rec-ENSC 3003; Soil Science: Pre-at least CSES 2203)
14-16 semester hours

**Fall Semester 4**
3 CSES 3023 Colloquium or AGED 4003 or AGED 3142 & AGED 3141L
4 ENSC 3223/3221L Ecosystems Assessment or BIOL 3863/3861L General Ecology
3 Statistics or Natural Resources Core
3-4 Soil Science or Natural Resources Core
3 Natural Resources Core or General Elective (Could apply elective toward a minor)
16-17 semester hours

**Spring Semester 4**
3 Natural Resources Core
3-4 Statistics or Natural Resources Core
3 General Elective or Natural Resources Core
3 General Elective as Broadening Elective (Could apply toward a minor)
0-3 General Elective (May wish to take another elective. Could apply toward a minor)
12-16 semester hours

**124-132 Total Hours**

SEE PAGE 338 FOR CROP, SOIL, AND ENVIRONMENTAL SCIENCE (CSES) COURSES AND SEE PAGE 351 FOR ENVIRONMENTAL SCIENCE (ENSC) COURSES.

**Minor in Crop Biotechnology (CBIO-M):**
The Crop Biotechnology Minor will consist of 18 semester hours of courses and will include the following:
PLPA 4333 Biotechnology in Agriculture
CSES 402V Special Topics (2 hour course taken in two different semesters)
BIOL 3323 General Genetics or ANSC 3123 Genetics
CHEM 3813 Introduction to Biochemistry
BIOL 4304 Plant Physiology
CSES 4103 Plant Breeding
A student planning to minor in Crop Biotechnology must notify the program adviser for consultation and more detailed information.

**Minor in Crop Management (CPMG-M)**
The Crop Management Minor will consist of 18 semester hours of 2000-level courses or above including CSES 2103 and CSES 2203 and an additional 12 hours from the courses listed below, with at least two courses from Group A.

**Group A:**
CSES 3113 Forage Management
CSES 3312 Cotton Production
CSES 3322 Soybean Production
CSES 3332 Rice Production
CSES 3342 Cereal Grain Production

**Group B:**
CSES 2003 Introduction to Weed Science
CSES 3214 Soil Resources and Nutrient Cycles
CSES 4013 Advanced Crop Science
CSES 4103 Plant Breeding
CSES 4133 Weed Identification, Morphology, and Ecology
CSES 4143 Principles of Weed Control
CSES 4224 Soil Fertility
CSES 4234 Plant Anatomy

A student planning to minor in Crop Management must notify the program adviser for consultation and more detailed information.

**Minor in Environmental, Soil, and Water Science (ESWS-M)**
The Environmental, Soil, and Water Science Minor will consist of 18 semester hours of courses to be selected from the following three groups.

**Group A:** Environmental science (6 hours)
ENSC 1003 Environmental Science and
3 additional hours from
AGEC 3413 Principles of Environmental Economics
AGEC 3503 Agricultural Law I
BIOL 3863/3861L General Ecology with lab
ENSC 3223 Ecosystems Assessment
ENSC 3103 Plants and Environmental Restoration
ENSC 3603 GIS for Environmental Science
ENSC 3263/3260L Environmental Soil and Water with lab
ENSC 3933 Environmental Ethics
ENSC 4034 Analysis of Environmental Contaminants
GEOL 1113/1111L General Geology with lab
RSOC/SOCI 4603 Environmental Sociology

**Group B:** Soil science (6 hours)
CSES 2203 Soil Science and
3 additional hours from
CSES 3214/3210L Soil Resources and Nutrient Cycles with lab
CSES 355V Soil Profile Description
CSES 4224/4220L Soil Fertility with lab
CSES 4253/4250L Soil Classification and Genesis with lab
CSES/ENSC 4263 Environmental Soil Science

**Group C:** Water science (6 hours)
ENSC 3003 Introduction to Water Science and
3 additional hours from
ENSC 4023/4020L Water Quality with lab
GEOG 3333 Oceanography
Entomology is the branch of science concerned with the study of insects and related organisms. It involves studies of their biology, structure, identification, economic significance, and population management. The major emphasis of the curriculum is an integrated approach to insect-pest management leading to ecologically and economically sound solutions to complex insect pest problems.

Entomology is a graduate degree at the University of Arkansas. Undergraduate students interested in entomology can pursue a minor in entomology or pest management. The requirements for a minor in pest management (PMGT) are listed on page 86.

### Minor in Entomology (ENTO-M)
The Entomology minor will consist of a minimum of 15 semester hours to include:

- ENTO 3013 Introduction to Entomology
- ENTO 4024 Insect Diversity and Taxonomy

Select three additional courses from:

- ENTO 4013 Insect Behavior and Chemical Ecology
- ENTO 4033 Immature Insects
- ENTO 4043 Apiculture
- ENTO 4053 Insect Ecology
- ENTO 4133 Advanced Applied Entomology
- ENTO 400V Special Problems

A student planning to minor in Entomology must notify the program adviser for consultation and more detailed information.

### Minor in Wildlife Habitat (WLHA-M)
The Wildlife Habitat Minor will consist of 20 semester hours of courses and will include the following:

**Group A (12 hours)**
- CSES 1203 Plant Science (or CSES 2103, Crop Science, or BIOL 1613/1611L, Plant Biology)
- CSES 2203 Soil Science
- ENSC 3103 Plants and Environmental Restoration
- BIOL 480V Special Problem in Biology (Wildlife Management Techniques)

* A maximum of 9 hours of CSES or ENSC course work will be allowed to count towards the student’s major as well as the minor.

The remaining minimum of 8 hours will come from the following groups with at least one course from each group:

**Group B**
- ENSC 1003 Environmental Science
- ENSC 3003 Introduction to Water Science
- ENSC 3223 Ecosystems Assessment
- ENSC 3603 GIS/GPS for Environmental Science
- BIOL 3863 General Ecology
- BIOL 3861 General Ecology Lab
- CSES 462V Internship with Arkansas Game and Fish Commission (optional based on availability)

**Group C**
- AGEC 3413 Principles of Environmental Economics
- BIOL 4763 Ornithology
- BIOL 4833 Animal Behavior
- CSES 2201L Soil Science Lab
- CSES 355V Soil Profile Descriptions
- CSES 4133 Weed ID, Morphology and Ecology
- CSES 4253 Soil Classification
- ENTO 3013 Introduction to Entomology
- GEOG 3003 Conservation of Natural Resources
- GEOG 3343 Natural Regions of North America
- GEOG 4093 Geography of Arkansas
- RECR 1023 Recreation and Natural Resources

A student planning to minor in Wildlife Habitat must notify the program adviser for consultation and more detailed information.

### Food Science (FDSC)
Ron Buescher  
Head of the Department  
Food Science Building  
479-575-4605

- Distinguished Professor Morris
- Professors Buescher, Crandall, Hettiarachchy, Howard, Johnson, Proctor, Ricke, Siebenmorgen
- Associate Professor Meullenet, Wang
- Assistant Professor Morawicki
- Adjunct Faculty Members Brady, Foote, Howell, King, Li, Marcy, Morris (M.), Owens, Pohlman, Prior, Roberts

Food science is the application of science and technology to processing, packaging, safety, product invention and distribution of food products. Food science deals with all aspects of food between production and consumption and involves many disciplines, including chemistry, microbiology, nutrition, engineering and sensory science.

Food science prepares students for many interesting, rewarding and challenging professional career opportunities in industry, business, governmental and educational organizations associated with food and food-related products. Due to the diversity and abundance of opportunities available, students graduating with a B.S.A. in food science readily obtain employment or continue studies for graduate school. Remaining graduates are pursuing post-graduate degrees.

Additionally, requirements for several pre-professional programs can be fulfilled while meeting requirements for the food science degree.

Students may choose one of two areas of concentration for their degree program: Food Science (FDSC) or Food Technology (FDTN). The FDSC concentration at the University of Arkansas is one of only 53 programs in the United States and the only one in Arkansas that is approved by the Institute of Food Technologists. It provides students with a strong background in basic and applied sciences and food chemistry, microbiology, analysis, quality and engineering.
The FDTN concentration provides students interested in food business and management careers with an integrated background in food science and business. With proper course selection, students in the food technology concentration can complete a minor in agribusiness or general business while completing their core requirements, thus leaving elective hours available for further educational enhancement. Students in both concentrations are offered opportunities for research, internships, international experiences and selection of a minor.

Requirements for a Major in Food Science (FDSC):

- English/Communications (12-15 hours)
  - English University Core Courses (6 hours) (both concentrations)
  - ENGL 2003 Advanced Composition or Exemption Elective – See page 41 for exemption information. (both concentrations)
  - COMM 1313 Fundamentals of Communication (both concentrations)
  - AGED 3142/3141L Agri Communications and lab or ENGL 3053 Technical and Report Writing (both concentrations)

- Mathematics University Core Course and Departmental Requirements (12-13 hours)
  - University Core MATH 1203 College Algebra (both concentrations)
  - MATH 1213 Plane Trigonometry (FDSC concentration)
  - MATH 2554 Calculus I (FDSC concentration)

- Science University Core Courses and Departmental Requirements (20-27 hours)
  - University Core BIOL 1543/1541L Principles of Biology and lab (both concentrations)
  - MATH 1213 Plane Trigonometry (FDSC concentration)
  - MATH 2554 Calculus I (FDSC concentration)

- University Core CHEM 1123/1121L University Chemistry II and lab (both concentrations)
  - University Core CHEM 1103/1101L University Chemistry I and lab (both concentrations)

- Fine Arts and Humanities (6 hours)
  - Fine Arts and Humanities Core (sections a, b, c or d) – See page 40

- Social Sciences University Core Courses (9 hours)
  - AGEC 1103 Ag Microeconomics and AGEC 2103 Ag Macroeconomics or ECON 2013 Macroeconomics and ECON 2023 Microeconomics (FDSC concentration)

- Fall Semester 1
  - FDSC 1103 Introduction to Food Science
  - FDSC 3103/3100L Principles of Food Processing and lab
  - FDSC 4713/4710L Food Product & Process Development and lab

- Spring Semester 1
  - FDSC Requirements for Food Science Concentration (FDSC) (22 hours)
  - HESC 1213 Nutrition in Health
  - FDSC 4114/4110L Food Analysis and lab
  - FDSC 4124/4120L Food Microbiology and lab
  - FDSC 4304/4300L Food Chemistry and lab
  - FDSC 4754/4750L Engineering Principles of Food Processing and lab
  - FDSC 4413/4410L Sensory Evaluation of Food and lab or FDSC 4203/4200L Quality Evaluation and Control and lab

- Food Science Eight- or Nine-Semester Degree Programs
  - Students wishing to follow the degree plan in Food Science should see page 42 in the Academic Regulations chapter for university requirements of the program. The Food Science major has two concentrations: Food Science and Food Technology. Specific courses for all concentrations are available in Section 2 of the Catalog of Studies, available at http://catalogofstudies.uark.edu.

- Fall Semester 1
  - 124 Total Hours Required

- Spring Semester 1
  - 3 University Core MATH 1203 College Algebra
  - 3 University Core ENGL 1023 Composition II
  - 3 University Core MATH 1213 Plane Trigonometry
  - 3 University Core WCOB 1120 Computer Competency Requirement
  - 6 hours from AGEC 2303 Introduction to Agribusiness, AGEC 4143 Agricultural Finance, AGEC 3303 Food and Agricultural Marketing or MGMT 3433 Principles of Marketing

- General Electives (18-22 hours)

- University Core Requirements (11 hours)
  - FDSC 1011 Food Science Orientation
3 COMM 1313 Fundamentals of Communication
0 WCOB 1120 Computer Competency Requirement
15 semester hours

**Fall Semester 2**
4 Science University Core CHEM 1123/1121L University Chemistry II and lab
1 CHEM 1101L University Chemistry I lab (Credit earned when CHEM 1121L is completed with grade of “C” or better)
FDSC concentration:
4 MATH 2554 Calculus I
3 COMM 1313 Fundamentals of Communication
3 University Core in Fine Arts/Humanities or Social Science or History
FDST concentration:
3 MATH 2053 Finite Mathematics
3 FDSC 2503 Food Safety and Sanitation
3 WCOB 1023 Business Foundations
1 General Elective
15 semester hours

**Spring Semester 2**
4 CHEM 2613/2611L Organic Physiological Chemistry and lab
3 University Core in Fine Arts/Humanities or Social Science or History (FDST: AGEC 2103 Ag Macroeconomics or ECON 2023 Microeconomics)
FDSC concentration:
3 Statistics Elective
4 BIOL 2013/2011L General Microbiology and lab
3 HESC 1213 Nutrition in Health
FDST concentration:
3 WCOB 1033 Data Analysis and Interpretation
3 MATH 2043 Survey of Calculus
3 General Elective
16-17 semester hours

**Fall Semester 3**
3-6 FDSC 3103/3100L Principles of Food Processing with lab and FDSC 4203 Quality Evaluation Control with lab (even years) or FDSC 4413 Sensory Evaluation of Food with lab (odd years)
3 University Core in Fine Arts/Humanities or Social Science or History
3 General Elective
FDSC concentration:
4 PHYS 2013/2011L College Physics I and lab
0-3 General Elective (odd years)
FDST concentration:
0-4 BIOL 2013/2011L General Microbiology and lab (odd years)
3 AGEC 3303 Food and Agricultural Marketing or MKTG 3433 Principles of Marketing
15-16 semester hours

**Spring Semester 3**
3 ENGL 2003 Advanced Composition or Exemption Elective
3 FDSC 4713 Food Product and Process Development with lab (odd years) or University Core in Fine Arts/Humanities or Social Science or History (even years)
3 General Elective
FDSC concentration:
4 FDSC 4754 Engineering Principles of Food Processing (odd years) or FDSC 4124 Food Microbiology (even years)
3 AGED 3142/3141L Agri Communications or ENGL 3053 Technical and Report Writing
FDST concentration:
0-2 FDSC 3202 Introduction to Food Law (even years)
3 AGEC 2303 Introduction to Agribusiness or upper level Business Elective
0-3 University Core in Fine Arts/Humanities or Social Science or History (odd years)
14-16 semester hours

**Summer Semester**
FDST concentration:
3 FDSC 431V Internship in Food Science
3 semester hours

**Fall Semester 4**
3-6 FDSC 3103 Principles of Food Processing with lab and FDSC 4203 Quality Evaluation and Control with lab (even years) or FDSC 4413 Sensory Evaluation of Food (odd years)
3 General Elective
FDSC concentration:
4 FDSC 4304 Food Chemistry
3 CHEM 3813 Introduction to Biochemistry
0-3 University Core in Fine Arts/Humanities or Social Science or History (odd years)
FDST concentration:
3 AGEC 4313 Agricultural Business Management or MGMT 3563 Management Concepts and Organizational Behavior
3 AGEC 4143 Agricultural Finance or Upper Level Business Elective
0-4 BIOL 2013/2011L General Microbiology and lab (odd years)
15-16 semester hours

**Spring Semester 4**
0-3 FDSC 4713 Food Product and Process Development with lab (odd years)
FDSC concentration:
4 FDSC 4114 Food Analysis with lab
4 FDSC 4124 Food Microbiology with lab (even years) or FDSC 4754 Engineering Principles of Food Processing with lab (odd years)
3-6 General Electives
FDST concentration:
3 AGEC 3142/3141L Agri Communications
3 University Core in Fine Arts/Humanities or Social Science or History
0-2 FDSC 3202 Introduction to Food Law (even years)
6 General Electives
14-15 semester hours

124 Total hours

**Minor in Food Science (FDSC-M):**
The following courses are required for a minor in Food Science:
FDSC 3103/3100L Principles of Food Processing
FDSC 4124/4120L Food Microbiology
FDSC 4304/4300L Food Chemistry
and a minimum of 7 hours selected from the following courses:
FDSC 2503 Food Safety and Sanitation
FDSC 3202 Introduction to Food Law
FDSC 4114/4110L Food Analysis
FDSC 4203/4200L Quality Evaluation and Control with lab
HESC 1213 Nutrition in Health

A student planning to minor in food science must consult a Department of Food Science adviser.
See page 353 for Food Science (FDSC) Courses

**Horticulture (HORT)**

David L. Hensley  
Head of the Department  
316 Plant Sciences Building  
479-575-2603

* Professors Clark, Hensley, Morelock, Murphy, Rom (C.)  
* Associate Professors Evans, Karcher, Lindstrom, Richardson, Srivastava  
* Research Associate Professors Andersen, Garcia, Robbins  
* Distinguished Professor Emeritus Moore  
* University Professor Emeritus Rom (R.)  
* Professors Emeritus Bradley, Einert, Huang, Klingaman, Martin, McFerran

The Department of Horticulture offers a broad, science-based degree with technical training: Horticulture, Landscape and Turf Sciences (HLTS).  
Horticulture, landscape and turf management involves selection, production, management, marketing, use and research of ornamental crops (shrubs, trees, flowers, and turf) and edible crops (herbs, vegetables and fruits) and turf grasses for the economic, nutritional, aesthetic and recreational well being of society. The major provides education and training in basic and applied sciences, arts and humanities, communication, and business and economics, to provide an understanding of the underlying principles in plant growth and development, development and use of new technologies, and the actual operation of a horticultural enterprise. In consultation with an academic adviser and mentor, students may individually focus their academic programs through required and elective courses to focus training in specialized areas such as production, greenhouse and floriculture sciences, turf management, golf course supervision, nursery production and management, crop production, pest management, sales and support services, education and training, and horticultural consulting. An internship in the industry is required to gain practical, hands-on experience.  
Job opportunities for horticulturists include horticulture crop production and management, horticulture merchandising and business, consulting, inspection, research, teaching, communications, allied industries serving horticultural producers, green industry journals and consultants. An internship in the industry is required to gain practical, hands-on experience.  
Job opportunities for students studying turf management include golf course superintendent, sports field manager, turfgrass science companies, seed or sod production, research, teaching or private consulting. Advanced study may be required for some careers.

Requirements for a Major in Horticulture, Landscape and Turf Sciences (See page 40 for University Core and page 69 for B.S.A. requirements)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>English/Communication University Core Courses (15 hours)</td>
<td></td>
</tr>
<tr>
<td>ENGL 1013 Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1023 Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2003 Advanced Composition or Exemption Elective</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1313 Fundamentals of Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

- Choose 6-7 hours from the following area:
  - University Core BIOL 1613/1611L Plant Biology with lab
  - University Core BIOL 1543/1541L Principles of Biology with lab
  - University Core BIOL 1613/1611L Plant Biology with lab
  - CHEM 2613/2611L Organic Physiological Chemistry with lab
  - CHEM 1074/1071L Fundamentals of Chemistry with lab
  - CHEM 1103/1011L University Chemistry I with lab
  - CHEM 1123/1121L University Chemistry II with lab

- Fine Arts/Humanities University Core Courses (6 hours)
  - Recommend LARC 1003 Basic Arts: The American Landscape
  - Recommend PHIL 2003 Introduction to Philosophy

- US History University Core Course (3 hours)

- Social Sciences University Core Courses (9 hours)
  - Recommend AGEC 1103 Principles of Agricultural Microeconomics

- Select 6 hours from other listed fields of study – See page 40

- Horticulture Core Requirements (20-22 hours)
  - AFLS 1011 Freshman Orientation
  - CSES 2203/2201L Soil Science with lab
  - HORT 3901 Horticultural Career Development
  - HORT 4403/4400L Plant Propagation with lab
  - HORT 462(3) Horticulture Internship

- Choose 6-7 hours from the following area:
  - CSES 2003/2000L Introduction to Weed Science with lab
  - PLPA 3004/3000L Principles of Plant Pathology with lab
  - ENTO 3013/3010L Introduction to Entomology with lab

- Horticulture Electives - select 18 hours from:
  - HORT 2303/2300L Introduction to Turfgrass Management with lab
  - HORT 3103/3100L Woody Landscape Plants with lab
  - HORT 3113/3110L Herbaceous and Indoor Plants with lab
  - HORT 3133/3130L Advanced Woody Landscape Plants with lab
  - HORT 3303 Vegetable Crops
  - HORT 3403/3400L Turfgrass Management with lab
  - HORT 4033 Professional Landscape Installation & Construction
  - HORT 4043 Professional Landscape Management
  - HORT 4103/4100L Fruit Production Science with lab
  - HORT 4503/4500L Nursery Management with lab
  - HORT 4603 Practical Landscape Planning
  - HORT 4703/4701L Greenhouse Management with lab
  - HORT 4803/4801L Floriculture with lab
  - HORT 4903/4900L Golf and Sports Turf Management with lab
  - HORT 4913 Rootzone Management for Golf and Sports Turf
  - HORT 4921 Golf Course Operations
  - HORT 400 (v) Horticulture Special Problems
  - HORT 401 (v) Horticulture Special Topics
  - Discipline-related electives – select 12 hours from:
    - AGEC 3102/3101L Small Power Units & Turf Equipment with lab
    - AGME 3153 Surveying in Agriculture and Forestry
    - AGME 4973/4970L Irrigation with lab
    - LARC 3914 Planting Design I
    - LARC 2113 Design Communications
    - WCOB classes (9 hours)
    - ANSC 3123 Principles of Genetics
    - PHYS 1023/1021L Physics & Human Affairs with lab (or higher)
    - or any AGEC, BIOL., CHEM, CSES, ENSC, ENTO, HORT, PLPA class not taken above.

General Electives (16-21 hours)
Horticulture, Landscape and Turf Sciences Nine-Semester Degree Plan

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
1 AFLS 1011 Freshman Orientation
3 University Core MATH 1203 College Algebra
3 University Core ENGL 1013 Composition I
3 COMM 1313 Fundamentals of Communication
4 University Core BIOL 1543/1541L Principles of Biology with lab
14 semester hours

Spring Semester 1
3 University Core ENGL 1023 Composition II
3 HORT 2003/2000L Principles of Horticulture with lab
3 Fine Arts/Humanities University Core
3 History Core Elective
3 Social Science Core (Rec AGEC 1103)
1 General Elective
16 semester hours

Fall Semester 2
5 CHEM 1074/1071L Fundamentals of Chemistry with lab
3 Communication Intensive Class
6 Horticulture Electives
14 semester hours

Spring Semester 2
4 University Core BIOL 1613/1611L Plant Biology with lab
3 Fine Arts/Humanities University Core
3 ENGL 2003 Advanced Composition or Exemption Elective
1 HORT 3901 Horticulture Career Development
3 Discipline-related Elective
3 General Elective
17 semester hours

Fall Semester 3
4 CSES 2203/2201L/2200D Soil Sciences
3-4 Pest Management Elective
3 Horticulture Elective
3 Social Sciences University Core Elective
3 Discipline-related Elective
16-17 semester hours

Spring Semester 3
4 CHEM 2613/2611L/2610D Organic Chemistry with lab
3-4 Discipline-related Elective
3 HORT 4403/4400L Plant Propagation with lab
3 Horticulture Elective
13-14 semester hours

Summer Semester 3
3 HORT 462V or HORT 463V or HORT 464V Summer Internship

Fall Semester 4
3 Discipline-related Elective
3 Horticulture Elective
3-4 Pest Management
5-6 General Electives
14-16 semester hours

Spring Semester 4
3 Social Science University Core Elective
3 Horticulture Elective
8-9 General Electives
14-15 hours

124 Total Hours

SEE PAGE 365 FOR HORTICULTURE (HORT) COURSES

PLANT PATHOLOGY (PLPA)

Sung M. Lim
Head of the Department
217 Plant Sciences Building
479-575-2445

- University Professors Riggs, TeBeest
- Professors Cartwright, R., Correll, Gergerich, Kirkpatrick, Lee, Lim, Milus, Robbins, Rothrock, Rupe, Weidemann
- Associate Professors Coker, Fenn, Korth, Spadley, Yang
- Lecturer Martin
- Adjunct Professors Damicone, Griffey
- Adjunct Assistant Professor Cartwright, K.
- Adjunct Associate Professor Jia

Plant pathology as a discipline seeks to understand the interrelationships of plants with the abiotic and biotic agents that affect plant health and productivity. The goal of the discipline is to minimize the impacts of plant diseases on agricultural production and human health. Scientific training within the department focuses on the nature, cause, and management of plant diseases caused by fungi, bacteria, viruses, and nematodes.

Plant pathology is a graduate degree program. Undergraduate students interested in plant pathology should pursue a minor in pest management or plant pathology. See page 69 for degree requirements.

Minor in Plant Pathology (PLPA-M)

A minor in Plant Pathology consists of 19 hours to include:

- PLPA 3004 Principles of Plant Pathology
- PLPA 400V Research
- PLPA 4103 Plant Disease Control

The remaining 9 hours are to be selected from the following:

- BIOL 4353 Ecological Genetics
- BIOL 4304 Plant Physiology
- BIOL 4424 Mycology
- BIOL 4233 Microbial Genetics
- BIOL 4753 General Virology

A student planning to minor in plant pathology should notify the department of plant pathology and consult adviser.

SEE PAGE 395 FOR PLANT PATHOLOGY (PLPA) COURSES

PEST MANAGEMENT (PMGT)

Craig Rothrock
Program Coordinator
206 Plant Science Building
479-575-2445

- Distinguished Professor Boyd
- University Professors Kim, Meisch, Oliver, Riggs, Stephen
- Professors Correll, Gergerich, Kirkpatrick, Kring, Lee, Lim, Luttrell, McLeod, Rothrock, Rupe, Steinkraus, TeBeest
- Associate Professors Burgos, Cartwright, Coker, Fenn, Lorenz, Milus
Poultry Science Degree Requirements

English/Communications University Core Courses (15 hours)
- University Core Courses (6 hours)
- ENGL 2003 Introduction to Communication
- ENGL 2013 – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication

Communication Intensive Elective from an approved course list.
- See adviser

Mathematics University Core Course and Departmental Requirements (6-7 hours)
- University Core MATH 1203 College Algebra or, if exempt from MATH 1203, take a higher MATH course
- AGEC 2403 Quantitative Tools for Agribusiness or STAT 2303 Principles of Statistics or AGST 4023 Principles of Experimentation

Science University Core Courses and Departmental Requirements (17-24 hours)
- University Core BIOL 1543/1541L Principles of Biology with lab
- BIOL 2033/2031L College Biology II with lab
- University Core CHEM 1074/1071L Fundamentals of Chemistry with lab or CHEM 1103/1101L University Chemistry I with lab and CHEM 1123/1121L University Chemistry II with lab
- CHEM 2613/2611L Organic Physiological Chemistry with lab or CHEM 3603/3601L Organic Chemistry with lab and CHEM 3613/CHEM 3611L Organic Chemistry II with lab
- Fine Arts/Humanities (6 hours)
  - Select in two categories from “State Minimum Fine Arts, Humanities Core” (sections a, b, c or d) – See page 40

POSC Major Requirements (48 hours)
- POSC 1023 Introduction to Poultry Science and Careers
- POSC 2353 Poultry Production and Management
- POSC 3223 Poultry Diseases
- POSC 3554 Avian Anatomy
- POSC 3433 Poultry Breeding or POSC 3123 Principles of Genetics
- POSC 4343 Poultry Nutrition
- POSC 4901 Undergraduate Seminar

POSC Electives (select 10 hours from the following):
- PHYS 1013/1011L College Physics I with lab; PHYS 2033/2031L College Physics II with lab; POSC 3032 Physiology I; POSC 3042 Physiology II; AGEC 2303 Introduction to Agribusiness; POSC 4213 Integrated Poultry Management Systems; POSC 4314 Egg and Meat Technology

6 hours upper-division POSC Electives (select from any upper division course in POSC)

12 hours discipline-related electives (See adviser)
- General Electives (12-20 hours)
  - 8-22 hours of electives must be 3000/4000 level

124 Total hours

POULTRY SCIENCE (POSC)

Walter G. Bottje
Head of the Department
0114 Poultry Center
479-575-4952

• Assistant Professor Spradley

Minor in Pest Management (PMGT-M)
A minor in Pest Management consists of 20-21 hours to include
- CSES 2003 Introduction to Weed Science
- ENTO 3013 Introduction to Entomology
- PLPA 3004 Principles of Plant Pathology

In addition, students must select one course from each area:
- CSES 4143 Principles of Weed Control or CSES 4133 Weed Identification, Morphology, and Ecology
- ENTO 4024 Insect Diversity and Taxonomy or ENTO 4123 Insect Pest Management, or ENTO 4133 Advanced Applied Entomology
- PLPA 4103 Plant Disease Control

Students interested in this area of study must declare their intention to the program coordinator.

A major in poultry science is designed to provide the scientific and technical education to prepare students for positions of leadership and responsibility in the expanding fields of production, processing, marketing, and distribution of meat, eggs, and related poultry products. The curriculum also prepares students for career opportunities in specialized areas of nutrition, breeding, and genetics, physiology, management, food science, immunology, and disease.

Elective hours allow students to select a minor and thus personalize their degree. Elective hours can also be used to emphasize areas of business, production, processing or science. Pre-veterinary medicine, pre-medical, or pre-pharmacy requirements may be fulfilled while meeting degree requirements.

Curricula are designed to permit the student to obtain the necessary foundation to pursue graduate study for the master’s and doctoral degrees. Advanced degrees are offered but not limited to the areas of nutrition, genetics, physiology, product technology, and poultry health.

Fall Semester 1
- 4 University Core BIOL 1543/1541L Principles of Biology with lab
- 3 University Core ENGL 1013 Composition I
- 3 COMM 1313 Fundamentals of Communication
- 3 POSC 1023 Introduction to Poultry Science and Careers
- 3 FNAR/Humanities University Core Elective
- 1 AFLS 1011 Freshman Orientation
- 17 semester hours

Spring Semester 1
- 3 POSC 2353 Poultry Production and Management
- 3 University Core ENGL 1023 Composition II
- 8-22 hours of electives must be 3000/4000 level
- 124 Total hours

Poultry Science Eight-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
- 4 University Core BIOL 1543/1541L Principles of Biology with lab
- 3 University Core ENGL 1013 Composition I
- 3 COMM 1313 Fundamentals of Communication
- 3 POSC 1023 Introduction to Poultry Science and Careers
- 3 FNAR/Humanities University Core Elective
- 1 AFLS 1011 Freshman Orientation
- 17 semester hours

Spring Semester 1
- 3 POSC 2353 Poultry Production and Management
- 3 University Core ENGL 1023 Composition II
- 8-22 hours of electives must be 3000/4000 level
- 124 Total hours

POULTRY SCIENCE (POSC)

Walter G. Bottje
Head of the Department
0114 Poultry Center
479-575-4952

• Assistant Professor Spradley

Minor in Pest Management (PMGT-M)
A minor in Pest Management consists of 20-21 hours to include
- CSES 2003 Introduction to Weed Science
- ENTO 3013 Introduction to Entomology
- PLPA 3004 Principles of Plant Pathology

In addition, students must select one course from each area:
- CSES 4143 Principles of Weed Control or CSES 4133 Weed Identification, Morphology, and Ecology
- ENTO 4024 Insect Diversity and Taxonomy or ENTO 4123 Insect Pest Management, or ENTO 4133 Advanced Applied Entomology
- PLPA 4103 Plant Disease Control

Students interested in this area of study must declare their intention to the program coordinator.

A major in poultry science is designed to provide the scientific and technical education to prepare students for positions of leadership and responsibility in the expanding fields of production, processing, marketing, and distribution of meat, eggs, and related poultry products. The curriculum also prepares students for career opportunities in specialized areas of nutrition, breeding, and genetics, physiology, management, food science, immunology, and disease.

Elective hours allow students to select a minor and thus personalize their degree. Elective hours can also be used to emphasize areas of business, production, processing or science. Pre-veterinary medicine, pre-medical, or pre-pharmacy requirements may be fulfilled while meeting degree requirements.

Curricula are designed to permit the student to obtain the necessary foundation to pursue graduate study for the master’s and doctoral degrees. Advanced degrees are offered but not limited to the areas of nutrition, genetics, physiology, product technology, and poultry health.

Fall Semester 1
- 4 University Core BIOL 1543/1541L Principles of Biology with lab
- 3 University Core ENGL 1013 Composition I
- 3 COMM 1313 Fundamentals of Communication
- 3 POSC 1023 Introduction to Poultry Science and Careers
- 3 FNAR/Humanities University Core Elective
- 1 AFLS 1011 Freshman Orientation
- 17 semester hours

Spring Semester 1
- 3 POSC 2353 Poultry Production and Management
- 3 University Core ENGL 1023 Composition II
- 8-22 hours of electives must be 3000/4000 level
- 124 Total hours

Poultry Science Eight-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
- 4 University Core BIOL 1543/1541L Principles of Biology with lab
- 3 University Core ENGL 1013 Composition I
- 3 COMM 1313 Fundamentals of Communication
- 3 POSC 1023 Introduction to Poultry Science and Careers
- 3 FNAR/Humanities University Core Elective
- 1 AFLS 1011 Freshman Orientation
- 17 semester hours

Spring Semester 1
- 3 POSC 2353 Poultry Production and Management
- 3 University Core ENGL 1023 Composition II
- 8-22 hours of electives must be 3000/4000 level
- 124 Total hours

Poultry Science Eight-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
- 4 University Core BIOL 1543/1541L Principles of Biology with lab
- 3 University Core ENGL 1013 Composition I
- 3 COMM 1313 Fundamentals of Communication
- 3 POSC 1023 Introduction to Poultry Science and Careers
- 3 FNAR/Humanities University Core Elective
- 1 AFLS 1011 Freshman Orientation
- 17 semester hours

Spring Semester 1
- 3 POSC 2353 Poultry Production and Management
- 3 University Core ENGL 1023 Composition II
- 8-22 hours of electives must be 3000/4000 level
- 124 Total hours

Poultry Science Eight-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
- 4 University Core BIOL 1543/1541L Principles of Biology with lab
- 3 University Core ENGL 1013 Composition I
- 3 COMM 1313 Fundamentals of Communication
- 3 POSC 1023 Introduction to Poultry Science and Careers
- 3 FNAR/Humanities University Core Elective
- 1 AFLS 1011 Freshman Orientation
- 17 semester hours

Spring Semester 1
- 3 POSC 2353 Poultry Production and Management
- 3 University Core ENGL 1023 Composition II
- 8-22 hours of electives must be 3000/4000 level
- 124 Total hours

Poultry Science Eight-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.
3 University Core MATH 1203 College Algebra or higher
3 FNAR/Humanities University Core Elective
3 Social Science Core Elective
15 semester hours

**Fall Semester 2**
3 ENGL 2003 Advanced Composition or ENGL 2013 Essay Writing or Exemption Elective
4-5 University Core CHEM 1103/1101L Chemistry I or CHEM 1074/1071L Fundamentals of Chemistry
3 History University Core Elective
3 Social Science Core AGEC 1103 Principles of Agricultural Microeconomics
3 Discipline-Related Elective
16-17 semester hours

**Spring Semester 2**
3 Communication Intensive Elective
4 CHEM 2613/2611L Organic Physiological Chemistry with lab or CHEM 1123/1121L Chemistry II with lab (if CHEM 1103/1101L taken previous fall)
4 POSC 3554 Avian Anatomy
3 Social Science Core Elective
3 Discipline-Related Elective
17 semester hours

**Fall Semester 3**
4 BIOL 2013/2011L General Microbiology with lab
3-4 CHEM 3603/3601L Organic Chemistry with lab (if CHEM 1103/1101L and CHEM 1123/1121L taken previously) or General Elective
3 POSC 4333 Poultry Breeding or POSC 3123 Principles of Genetics
2-4 POSC Elective (from PHYS 2013/2011L, POSC 3032, AGEC 2303, POSC 4314)
12-15 semester hours

**Spring Semester 3**
3-4 CHEM 3613/3611L Organic Chemistry II with lab (if CHEM 3603/3601L taken previously) or General Elective
2-4 POSC Elective (from PHYS 2033/2031L College Physics II with lab, POSC 3042 Animal Physiology II; AGEC 2303 Introduction to Agribusiness, POSC 4213 Integrated Poultry Management)
3 Upper-Division POSC Elective
3 Discipline-Related Elective
3 General Elective
14-17 semester hours

**Fall Semester 4**
3 POSC 3223 Poultry Diseases
2-4 POSC Elective (from PHYS 2013/2011L, POSC 3032, AGEC 2303, POSC 4314) or General Elective
3 Upper-Division POSC Elective
3 AGEC 2403 Quantitative Tools for Agribusiness or General Elective
3 General Elective
14-16 semester hours

**Spring Semester 4**
3 POSC 4343 Poultry Nutrition
3 STAT 2303 Principles of Statistics or AGST 4023 Principles of Experimentation (if AGEC 2403 not taken) or General Elective
2-4 POSC Elective (from PHYS 2033/2031L College Physics II, POSC 3042 Animal Physiology II; AGEC 2303 Introduction to Agribusiness, POSC 4213 Integrated Poultry Management) or General Elective
1 POSC 4901 Undergraduate Seminar
3 Discipline-Related Elective
12-14 semester hours

**124 Total hours**

**Minor in Poultry Science (POSC-M):**
15 semester hours to include
POSC 1023/1020L Introduction to Poultry Science and Careers
POSC 2353/2350L Poultry Production and Management
The remaining 5 hours to be selected from any POSC course.
A student planning to minor in poultry science should consult a departmental adviser.

**Requirements for a Certificate of Proficiency:**
Robert Wideman
Program Coordinator
O-402 Poultry Science Center
479-575-4397

Certificates of Proficiency in Hazard Analysis and Critical Control Point (HACCP) and Food Safety Manager (FMGR) recognize students who take a concentrated core of web-based courses focused on the application of scientifically-based food safety systems through the application of HACCP systems.

Students who earn the HACCP certificate will have a working knowledge of fundamental food microbiology, food sanitation, applicable law, statistical process control, and advanced HACCP applications in food processing industries. Prerequisites for acceptance: applicants to the HACCP Coordinator Certificate of Proficiency Program must have completed a B.S. degree or have at least seven years relevant experience in the food industry.

**HACCP Certificate Requirements:**
15 hours of web-based courses:
POSC 2003 Fundamentals of Food Microbiology
POSC 4034 Statistical Process Control in the Food Industry
HLSC 4623 Human Diseases
FDSC 2503 Food Safety and Sanitation
FDSC 3202 Introduction to Food Law

Students who earn the Food Safety Manager (FMGR) Certificate of Proficiency will have a working knowledge of advanced food microbiology, food process engineering, human diseases, and quality management as applied in food processing industries. Applicants to the Food Safety Manager Certificate of Proficiency must have completed the HACCP certificate program of study.

**FMGR Certificate requirements:**
15 hours of web-based courses:
FDSC 3753 Introduction to Food Engineering Principles
HLSC 4613 Principles of Epidemiology
FDSC 4823 Principles of Food Microbiology
POSC 4023 Advanced Topics in Food Safety Management
INEG 4323, Quality Engineering and Management

SEE PAGE 397 FOR POULTRY SCIENCE (POSC) COURSES
SCHOOL OF HUMAN ENVIRONMENTAL SCIENCES (HESC)

Mary M. Warnock
Director
118 Home Economics Building
479-575-4305

- Professors Farmer, Martin, Warnock, Whan
- Associate Professors Bailey, Fitch-Hilgenberg, Gentry, Noble, Robertson, Turner, Webb
- Assistant Professors Apple, Chi, Foote, Killian, Miller, Sattar, Takigiku, Wallack
- Instructors Baldwin, Crandall, Harding, Loewer, Powell, Smith
- Lecturer Cooper

The School of Human Environmental Sciences at the University of Arkansas prepares students for a wide variety of professional careers in education, industry, business, government, and community services. The school is concerned with improving the quality of life for individuals and families as they exist and function in society. Human environmental sciences draws knowledge from its own research, from the physical, biological, and social sciences, and from arts and humanities. It relates this knowledge to an understanding of individuals’ and families’ needs and goals for food, clothing, shelter, management of resources, and human development and relationships. The School of Human Environmental Sciences has made a substantial contribution to the development of individuals and families through undergraduate and graduate preparation of human environmental scientists and through research in human nutrition, foods, human development, family sciences, interior design, apparel and textiles.

The four majors of the B.S.H.E.S. degree have been accredited by the Council for Professional Development of the American Association of Family and Consumer Sciences. See page 67 for list of majors, concentrations, minors. See page 69 for college academic regulations and graduation requirements.

APPLARE STUDIES (APST)

Mary M. Warnock
Area Coordinator
119 Home Economics Bldg.
479-575-4310

The Apparel Studies program opens the door to careers in the fashion industry. Buyer, product development specialist, fashion coordinator, sales consultant, visual display artist, and quality assurance technician are only a few of the possibilities. Classes in business, retailing, apparel production, science, social science, and the liberal arts give students a basic knowledge about the textile and apparel industries. By selecting from a variety of minors, students can tailor this program to meet their goals. Program strengths include guest speakers who provide insight into today’s careers, tours of major fashion centers, and internships, which provide valuable career experience.

Apparel Studies Ten-Semester Degree Program

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program. A description of HESC courses is listed on page 358.

Fall Semester 1

- 3 University Core ENGL 1013 Composition
- 3 University Core MATH 1203 College Algebra
- 3 University Core ARTS 1003 Basic Art
- 3 HESC 1013 Intro to Clothing Concepts
- 1 HESC 1501 Orientation to HESC
- 3 HESC 1053 Computer-Based Methods-Apparel

124 Total Hours
<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
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| **Spring Semester 1** | 3 University Core ENGL 1023 Composition II  
3 MATH 2053 Finite Math  
3 HESC 1023 Introduction to Apparel Production  
3 HESC 2413 Family Relations  
3 HESC 2053 Textiles with lab  |
|            | 16 semester hours |
| **Fall Semester 2** | 5 CHEM 1074/1071L Fundamentals of Chemistry with lab  
3 University Core PSYC 2003 General Psychology  
3 History University Core Elective  
3 HESC 2023 Visual Merchandising  |
|            | 14 semester hours |
| **Spring Semester 2** | 3 HESC 2013 Quality Assessment of Apparel  
3 HESC 1213 Nutrition in Health  
3 Computer Course AGME 2903 Application of Microcomputers or CSCE 1003 Survey of Computer Concepts or other  
3 University Core ECON 2143 Economics  
3 University Core Elective ANTH 1023 Intro to Cultural Anthropology or SOCI 2013 General Sociology  |
|            | 15 semester hours |
| **Summer Session** | 3 HESC 4903 Recent Advances in Apparel Manufacturing & Merchandising  |
| **Fall Semester 3** | 3 COMM 1313 Fundamentals of Communication  
3 HESC 3013 Introduction to Fashion Merchandising  
4 University Core BIOL 1543/1541L Principles of Biology  
3 MKTG 3433 Principles of Marketing  
3 Foreign Language Elective  |
|            | 16 semester hours |
| **Spring Semester 3** | 3 ENGL 2003 Advanced Composition or Exemption Elective  
3 HESC 3033 Fashion Merchandising Methods  
3 Foreign Language Elective  
3 Humanities University Core Elective  
3 HESC 3003 Apparel Production  |
|            | 15 semester hours |
| **Summer Session** | 3 HESC 4073 Apparel Studies Internship  |
| **Fall Semester 4** | 3 HESC 4023 Advanced Apparel Merchandising  
3 HESC 4043 History of Apparel  
3 HESC 4063 Advanced Apparel Production  
6 General Electives  |
|            | 15 semester hours |
| **Spring Semester 4** | 3 HESC 4053 Contemporary Apparel  
3 HESC 4033 Advanced Textile Study  
6 General Electives  |
|            | 12 semester hours |
| **124 Total hours** |   |
General Foods and Nutrition (GFNU)

Students taking this concentration are encouraged to select an approved minor from the Bumpers, Walton, or Fulbright colleges or plan other combinations of courses to prepare for non-traditional vocations including work in community or government sponsored programs, wellness and health maintenance centers, public relations in the food industry, TV/media outlets for food and nutrition information, and international food or nutritional programs.

General Foods & Nutrition Requirements:
English/Communications (12-15 hours)
- English University Core courses (6 hours)
- ENGL 2003 Advanced Composition or Exemption Elective – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication
- Communication Intensive Elective – ENGL 3053 Technical and Report Writing or JOUR 3123 Feature Writing or AGED 3142/3141L Agri Communications with lab
- Mathematics University Core Course (3 hours)
- Science University Core Courses and Departmental Requirements (27 hours)
- CHEM 1103/1101L University Chemistry I with lab
- CHEM 1123/1121L University Chemistry II with lab
- CHEM 2613/2611L Organic Physiological Chemistry with lab
- CHEM 3813 Introduction to Biochemistry
- BIOL 2013/2011L General Microbiology with lab
- Select either: BIOL 2213/2211L Human Physiology with lab and BIOL 2443/2441L Human Anatomy with lab or BIOL 1543/1541L Principles of Biology with lab and ANSC 3032 Animal Physiology I and ANSC 3042 Animal Physiology II
- Fine Arts/Humanities University Core Courses (6 hours)
- Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40

US History University Core Course (3 hours)
Social Sciences University Core Courses (9 hours)
- PSYC 2003 General Psychology
- HESC 2413 Family Relations
- Select a 3-hr economic course from “State Minimum Core” – See page 40

GFNU Major Requirements (37-39 hours)
- HESC 1201 Introduction to Dietetics and Nutrition or HESC 1603 Introduction to Hospitality Management
- HESC 1501 Orientation to HESC
- HESC 1213 Nutrition in Health
- HESC 2112/2111L Foods I with lab
- HESC 2203 Nutrition for Exercise and Sport
- HESC 3203 Nutrition for Health Professionals and Educators
- HESC 3213 Dietetic and Nutrition Practices: Tools and Applications
- HESC 3604 Food Preparation for the Hospitality Industry
- HESC 3653 Food Systems Management
- HESC 4103 Experimental Foods
- HESC 4213 Advanced Nutrition
- HESC 4223 Nutrition During the Life Cycle
- HESC 4243 Community Nutrition
- HESC 425V Food and Nutrition Seminar (1 hour)
- AGST 4023 Principles of Experimentation or Equivalent Elective
- HESC 4264/4260L Medical Nutrition Therapy I with lab
- HESC 4273 Medical Nutrition Therapy II
- HESC 4613 Food Service Purchasing
- HESC 4623 Selection and Layout of Food Service Equipment
- General Electives (9-15 hours)
- Recommend:
  - HESC 2203 Nutrition for Exercise & Sport
  - KINS 3153 Exercise Physiology
  - PHIL 2103 Introduction to Ethics
  - ARTS 1313 Two Dimensional Design
- 124 Total Hours

Hospitality and Restaurant Management (HRMN): Students in the hospitality and restaurant management concentration prepare themselves for managerial positions in the restaurant and hospitality industry. This dynamic curriculum provides students with skills in foods and business, as well as hospitality and restaurant management. Students have the opportunity to manage and operate a restaurant on campus. Students obtain hands-on experience by completing 1,000 hours of satisfactory, verifiable work experience in the hospitality and restaurant industry, usually completed during the summer and on part-time jobs during the school year. This noncredit work experience must be completed prior to graduation. A management internship, which allows students to acquire practical management experience and specialized knowledge from supervised work in a hotel, restaurant, or other hospitality-related business, is also part of this degree. Students in this program can complete a minor in business.

Hospitality and Restaurant Management Degree Requirements:
English/Communications (12-15 hours)
- English University Core courses (6 hours)
- ENGL 2003 Advanced Composition or Exemption Elective – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication
- Communication Intensive Course – AGED 3142/3141L Agri Communications with lab
- Mathematics University Core Course (3 hours)
- Mathematics University Core Course (3 hours) and WCOB 1120 Computer Competency Requirement or Equivalent
- Science University Core Courses and Departmental Requirements (8-9 hours)
- University Core CHEM 1103/1101L University Chemistry I with lab and
- University Core CHEM 1123/1121L University Chemistry II with lab or
- BIOL 1543/1541L Principles of Biology with lab and
- CHEM 1074/1071L Fundamentals of Chemistry with lab
- Fine Arts/Humanities University Core Courses (6 hours)
- Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40
Dale Bumpers College of Agricultural, Food and Life Sciences

US History University Core Course (3 hours)
Social Sciences University Core Courses (9 hours)
  PSYC 2003 General Psychology
  HESC 2413 Family Relations
  ECON 2143 Basic Economics
HRMN Major Requirements (17 hours)
  HESC 1501 Orientation to HESC
  HESC 1213 Nutrition in Health
  HESC 2112/2111L Foods I with lab
  HESC 3604 Food Preparation for the Hospitality Industry
  HESC 3653 Food Systems Management
  HESC 4103 Experimental Foods
Additional Requirements (46-52 hours)
  HESC 1601 Work Experience Practicum (1-4 hours)
  HESC 1603 Introduction to Hospitality and Restaurant Management
  HESC 2123 Catering Management with lab
  HESC 2623 Legal Issues in Hospitality Industry with lab or Equivalent
  HESC 2633 Introduction to Hotel Operations
  HESC 3613 Resort Management
  HESC 3633 Front Office Management
  HESC 4613 Food Service Purchasing
  HESC 4623 Selection and Layout of Food Service Equipment
  HESC 4633 Advanced Hotel Operations
  HESC 4643 Convention and Meeting Management
  HESC 4653 Global Travel and Tourism Management
  HESC 4693 Hospitality Management Internship (3-6 hours)
  FDSC 2503 Food Safety/Sanitation
  AGEC 2143 Ag Financial Records or Equivalent
  AGEC 3303 Food & AG Marketing or Equivalent
Physical Education (2 hours)
  General Electives (8-18 hours) – Recommend foreign language (6 hours), HLSC 3633 First Responder-First Aid
124 Total Hours

**Food, Human Nutrition and Hospitality Eight-Semester Degree Program**
Students wishing to follow the degree plan in Food, Human Nutrition and Hospitality should see page 42 in the Academic Regulations section for university requirements of the program. The Food, Human Nutrition and Hospitality major has three concentrations: Dietetics; General Human Nutrition, and Hospitality and Restaurant Management. Specific courses for all concentrations are available in Section 2 of the Catalog of Studies, available at http://catalogofstudies.uark.edu. A description of HESC courses is listed on page 358.

### Dietetics Concentration

#### Fall Semester 1
  4 CHEM 1103/1101L University Chemistry I with lab
  3 MATH 1203 College Algebra or MATH 1213 Plane Trigonometry
  1 HESC 1501 Orientation to HESC
  1 HESC 1201 Introduction to Dietetics & Nutrition
  3 HESC 1213 Nutrition in Health
  3 ENGL 1013 Composition I
  1 PEAC or DEAC Elective
  16 semester hours

#### Spring Semester 1
  4 CHEM 1123/1121L University Chemistry II with lab
  3 MATH 1203 College Algebra or MATH 1213 Plane Trigonometry
  1 HESC 1501 Orientation to HESC
  1 HESC 1201 Introduction to Dietetics & Nutrition
  3 HESC 1213 Nutrition in Health
  3 ENGL 1013 Composition I
  1 PEAC or DEAC Elective
  16 semester hours

#### Fall Semester 2
  3 HESC 2112/2111L Foods I
  2 ANSC 3032 Animal Physiology I
  3 PSYC 2003 General Psychology
  3 ENGL 2003 Advanced Composition or Exemption Elective
  3 COMM 1313 Fundamentals of Communication
  1 PEAC or DEAC Elective
  15 semester hours

#### Spring Semester 2
  4 CHEM 2613/2611L Organic Physiological Chemistry
  3 HESC 2413 Family Relations
  2 ANSC 3042 Animal Physiology II
  3 HESC 3203 Nutrition for the Health Professional & Educator
  3 Fine Arts & Humanities University Core Elective
  15 semester hours

#### Fall Semester 3
  3 CHEM 3813 Organic Chemistry II
  4 HESC 3604/3600L Food Preparation for the Hospitality Industry with lab
  3 HESC 3213 Dietetic & Nutrition Practices
  3 HESC 3653 Food Systems Management
  3 General Elective
  16 semester hours

#### Spring Semester 3
  4 BIOL 2013/2011L Microbiology with lab (BIOL 1543/1541L and 2 semesters of general chemistry)
  3 Communications Intensive Elective: ENGL 3053 Technical and Report Writing, JOUR 3123 Feature Writing or AGED 3142/3141L Agri Communications
  3 AGST 4023 Principles of Experimentation or Equivalent Elective
  3 HESC 4103/4100L Experimental Foods with lab
  3 US History University Core Elective
  16 semester hours

#### Fall Semester 4
  3 HESC 4213 Advanced Nutrition
  3 HESC 4613 Food Service Purchasing
  4 HESC 4264/4260L Medical Nutrition Therapy I
  3 HESC 4223 Nutrition During the Life Cycle
  3 Social Science Core Elective
  16 semester hours

#### Spring Semester 4
  3 HESC 4273 Medical Nutrition Therapy II
  3 HESC 4623 Selection & Layout of Food Service Equipment
  1 HESC 425V Food and Nutrition Seminar
  3 HESC 4243 Community Nutrition.
  3 General Elective
  13 semester hours

124 Total Hours
The general human environmental sciences curriculum serves students seeking a background in all of the subject-matter areas of human environmental sciences. The general curriculum prepares students for careers in social services, business, and the Cooperative Extension Service. Liberal elective hours allow students to select courses and programs to meet individual needs.

Students may be certified by the Arkansas State Board of Education to teach family and consumer sciences in Arkansas public schools by combining the pre-professional education courses as electives and completing the Master of Arts in teaching (M.A.T.) degree requirements. (See M.A.T., page 229). At the beginning of the sophomore year, students should consult with their advisers to schedule the general education and pre-professional education courses.

General Human Environmental Sciences Degree Requirements:

English/Communications (12 hours)
- English University Core Courses (6 hours)
- ENGL 2003 Advanced Comp or Exemption Elective – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication

Mathematics & Computers (6 hours)
- MATH 1203 College Algebra or MATH 1213 Plane Trigonometry
- ETEC 2001/2002L Educational Technology with lab or Equivalent

Science University Core Courses and Departmental Requirements (13 hours)
- CHEM 1074/1071L Fundamentals of Chemistry with lab
- CHEM 2613/2611L Organic Chemistry with lab
- BIOL 1543/1541L Principles of Biology with lab

Fine Arts/Humanities University Core Courses (6 hours)
- ARTS 1003 Basic Arts
- Select in one category from “State Minimum Arts/Humanities Core” (sections b, c, or d) – See page 40

US History University Core Course (3 hours)
- PSYC 2003 General Psychology

Social Sciences University Core Courses (9 hours)
- Select 6 hours University Core Courses from other listed fields of study

GHES Major Requirements (43-44 hours)
- HESC 1013 Introduction to Clothing Concepts
- HESC 1023 Introduction to Apparel Production
- HESC 1213 Nutrition in Health or HESC 3204 Nutrition for Health Professionals and Educators
- HESC 1403 Life Span Development
- HESC 1501 Orientation to HESC
- HESC 2053 Introduction to Textile Science
- HESC 2112/2111L Foods I with lab
- HESC 2123 Catering Management
- HESC 2413 Family Relations
- HESC 2433 Child Development
- HESC 3402/3401L Child Guidance with lab
- HESC 4753 Family Financial Management
- HESC 3763L Family Resource Management Lab
- HESC 4813 Human Factors in ID
- HESC 4453 Parenting and Family Dynamics

Physical Education (3 hours)
- PEAC 1621 Fitness Concepts
- HLSC 1002 Wellness Concepts

General Electives (28-29 hours)
- 124 Total Hours

General Human Environmental Sciences Eight-Semester Degree Program
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
- 3 HESC 1403 Lifespan
- 1 HESC 1501 Orientation to HESC
- 3 ENGL 1013 Composition I
- 3 MATH 1203 College Algebra or MATH 1213 Plane Trigonometry
- 3 ETEC 2001/2002L Computer or Equivalent

Spring Semester 1
- 3 HESC 1013 Introduction to Clothing Concepts
- 3 HESC 2413 Family Relations
- 3 PSYC 2003 General Psychology
- 3 ENGL 1023 Composition II
- 3 General Elective
- 1 PEAC 1621 Fitness Concepts
- 16 semester hours

Fall Semester 2
- 3 HESC 1023 Introduction to Apparel Production
- 3 HESC 2433 Child Development
- 3 COMM 1313 Fundamentals of Communications
- 2 HLSC 1002 Wellness Concepts
- 5 CHEM 1074/1071L Fundamentals of Chemistry with lab
- 16 semester hours

Spring Semester 2
- 3 HESC 3402/3401L Child Guidance with lab
- 3 HESC 2053 Introduction to Textile Science with lab
- 3 Social Science Core Elective
- 3 Humanities Core Elective (sections b,c,d)
- 3 General Elective
- 15 semester hours

Fall Semester 3
- 3 HESC 3763L Family Resource Management Lab
- 3 HESC 2112/1211L Foods I with lab
- 3 ENGL 2003 Advanced Composition
- 4 BIOL 1543/1541L Principles of Biology with lab
- 3 Social Science Core SOCI 2013 General Sociology
- 16 semester hours

Spring Semester 3
- 3 HESC 2123 Catering for Healthy Lifestyles
- 3-4 HESC 1213 Nutrition in Health or HESC 3204 Nutritional Health for Professionals and Educators
- 4 CHEM 2613/2611L Organic Chemistry with lab
- 6 General Electives – upper division
- 16-17 semester hours
Dale Bumpers College of Agricultural, Food and Life Sciences

Fall Semester 4
3 HESC 4453 Parenting/Family Dynamics
3 HESC 4753 Family Financial Management
3 U.S. History Core Elective
6 General Electives – upper division
15 semester hours

Spring Semester 4
3 HESC 4813 Human Factors in Interior Design
11-12 General Electives – upper division
14-15 semester hours

124 Total Hours

HUMAN DEVELOPMENT, FAMILY SCIENCES, AND RURAL SOCIOLOGY (HDFSRS)
Sue S. Martin
Area Coordinator
104 Home Economics Bldg.
479-575-4578

Students majoring in human development and family sciences prepare for one of the fastest growing employment opportunities in the country. The human services area includes jobs that serve people from conception through the last stages of life. Students develop skills for working with individuals and families in governmental, private, and nonprofit organizations. Two concentrations are offered:

Child Development (CDEV)
This concentration is for students who desire in-depth knowledge of children and programs for children from birth to age 12. The focus on children covers issues from the prenatal to early adolescence. Graduates may work as preschool teachers, daycare directors, specialists in the field of child life, and as child advocates.

Child Development Degree Requirements:
English/Communications (12 hours)
- English University Core Courses (6 hours)
- ENGL 2003 Advanced Comp or Exemption Elective – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication
Mathematics University Core Course and Computers (5-6 hours)
- MATH 1203 College Algebra or higher
- Computer Course (2-3 hours)
Science University Core Courses (8 hours) to include
- BIOL 1543/1541L Principles of Biology with lab
- Fine Arts/Humanities University Core Courses (6 hours)
- Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40
US History University Core Course (3 hours)
Social Sciences University Core Courses (9 hours)
- PSYC 2003 General Psychology
- SOC 2013 General Sociology or RSOC 2603 Rural Sociology
HDFS Major Requirements (22 hours)
- HESC 1213 Nutrition in Health
- HESC 1501 Orientation to HESC
- HESC 2413 Family Relations
- HESC 2433 Child Development
- HESC 3423 Adolescent Development
- HESC 4423 Adult Development
- HESC 4753 Family Financial Management
- HESC 4453 Parenting and Family Dynamics
CDEV Requirements (37 hours)
- HESC 2402/2401L Infant & Toddler Development with lab
- HESC 3402/3401L Child Guidance with lab
- HESC 4463 Administration & Evaluation of Child Development Programs
- HESC 4472/4472L Child Development Practicum with lab
- SCWK 3633 Problems of Child Welfare
- CIED 3023 Survey of Exceptionalities
- CIED 3103 Children’s Literature
- CIED 3113 Emergent and Developmental Literacy
Select 12 hours from
- HESC 3443 Families in Crisis
- HESC 3763L Family Resource Management Lab
- HESC 4433 Dynamic Family Interaction
- HESC 4483 Internship in HDFS
- HESC 4493 Public Policy Advocacy for Children and Families
- HESC 4223 Nutrition During the Life Cycle
- CIED 3263 Language Development for the Educator
- RSOC 4603 Environmental Sociology
- RSOC 4623 Introduction to Community Development
General Electives (21-23 hours)
124 Total Hours

Human Development, Family Sciences, and Rural Sociology Eight-Semester Degree Program with Child Development Concentration
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
3 ENGL 1013 Composition I
1 HESC 1501 Orientation to HESC
3 COMM 1313 Fundamentals of Communications
3 MATH 1203 College Algebra or higher
3 History Core Elective
3 Fine Arts Core Elective
16 semester hours

Spring Semester 1
3 PSYC 2003 General Psychology
4 BIOL 1543/1541L Principles of Biology with lab
3 HESC 2413 Family Relations
3 ENGL 1023 Composition II
3 Computer Course
16 semester hours

Fall Semester 2
3 HESC 1213 Nutrition in Health
3 HESC 2402/2401L Infant & Toddler Development with lab
3 Humanities Core Elective
3 Economics Elective
4 Physical Science Core Elective
16 semester hours

Spring Semester 2
3 HESC 2433 Child Development
3 ENGL 2003 Advanced Composition or Exemption Elective
3 SOC 2013 General Sociology or RSOC 2603 Rural Sociology
6 General Electives
15 semester hours
Fall Semester 3
3 CIED 3103 Children’s Literature
3 CIED 3113 Emergent & Developmental Literacy
3 SCWK 3633 Problems of Child Welfare
3 HESC 3402/3401L Child Guidance with lab
3 CDEV Elective
15 semester hours

Spring Semester 3
3 HESC 3423 Adolescent Development
4 HESC 4472/4472L Child Development Practicum with lab
3 CIED 3023 Survey of Exceptionalities
3 CDEV Elective
3 General Elective
16 semester hours

Fall Semester 4
3 HESC 4753 Family Financial Management
3 HESC 4423 Adult Development
3 HESC 4463 Administration & Evaluation of Child Development Programs
3 CDEV Elective
3 General Elective
15 semester hours

Spring Semester 4
3 HESC 4453 Parenting and Family Dynamics
3 CDEV Elective
9 General Electives
15 semester hours

124 Total Hours

Lifespan (LSPN)
This area of study covers the care issues faced by families and individuals in contemporary society. The knowledge and skills developed in this program will prepare the student to work in areas such as aging, parent education, financial and consumer counseling, youth services, and other human service type careers.

LSPN Lifespan Degree Requirements
English/Communications (12 hours)
- English University Core Courses (6 hours)
- ENGL 2003 Advanced Comp or Exemption Elective – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication
Mathematics University Core Course and Computers (5-6 hours)
- MATH 1203 College Algebra or higher
- Computer Course (2-3 hours)
Science University Core Courses (8 hours)
- BIOL 1543/1541L Principles of Biology with lab
- University Core Science Elective (4 hours)
Fine Arts/Humanities University Core Courses (6 hours)
- Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40
US History University Core Course (3 hours)
Social Sciences University Core Courses (9 hours)
- PSYC 2003 General Psychology

HDFS Major Requirements (22 hours)
- HESC 1213 Nutrition in Health or HESC 3204 Nutrition for Health Professionals and Educators
- HESC 1501 Orientation to HESC
- HESC 2413 Family Relations
- HESC 2433 Child Development
- HESC 3423 Adolescent Development
- HESC 4423 Adult Development
- HESC 4753 Family Financial Management
- HESC 4453 Parenting and Family Dynamics

LSPN Requirements (36-37 hours)
- HESC 1403 Lifespan Development
- HESC 3443 Families in Crisis
- HESC 4433 Dynamic Family Interaction
- HESC 4443 Gerontology
- HESC 4493 Public Policy Advocacy
- PSYC 2013 Introduction to Statistics or STAT 2303 Principles of Statistics or SOCI 3303/3301L Data and Analysis or WCOB 1033 Data Analysis and Interpretation
- PSYC 3073 Research Methods or SCWK 4073 Social Work Research & Technology I or SOCI 3313 Social Research
- SCWK 3163 On Death and Dying
Select 12 hours from
- SCWK 3183 Elderly Citizen
- SCWK 3233 Juvenile Delinquency
- SCWK 3633 Problems of Child Welfare
- SCWK 4133 Family Preservation
- SCWK 4143 Addiction and the Family
- CNED 3053 The Helping Relationship
- CDIS 4273 Communication Behavior and Aging
- COMM 3433 Family Communication
- HESC 3763L Family Resource Management Lab
- HESC 4483 Internship in Human Development and Family Studies
- RSOC 4603 Environmental Sociology
- RSOC 4623 Introduction to Community Development
- General Electives (21-23 hours)
124 Total Hours

Human Development, Family Sciences, and Rural Sociology
Eight-Semester Degree Program with Life Span Concentration
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

Fall Semester 1
3 ENGL 1013 Composition I
1 HESC 1501 Orientation to HESC
3 MATH 1203 College Algebra or higher
3 HESC 1403 Lifespan Development
3 Fine Arts Core Elective
3 Computer Course Elective
16 semester hours

Spring Semester 1
3 PSYC 2003 General Psychology
4 BIOL 1543/1541L Principles of Biology with lab
3 HESC 2413 Family Relations
3 ENGL 1023 Composition II
3 General Elective
16 semester hours
Fall Semester 2
3 HESC 1213 Nutrition in Health
3 History Core Elective
4 Physical Science Core Elective
3 COMM 1313 Fundamentals of Communications
3 General Elective
16 semester hours

Spring Semester 2
3 HESC 2433 Child Development
3 HESC 3423 Adolescent Development
3 SOCI 2013 General Sociology or RSOC 2603 Rural Sociology
3 Humanities Core Elective
3 General Elective
15 semester hours

Fall Semester 3
3 HESC 3443 Families in Crisis
3 PSYC 2013 Introduction to Statistics or STAT 2303 Principles of Statistics or SOCI 3303/3301L Data and Analysis or WCOB 1033 Data Analysis and Interpretation
3 ENGL 2003 Advanced Composition or Exemption Elective
3 LSPN Elective
4 General Elective
16 semester hours

Spring Semester 3
3 SCWK 3163 On Death and Dying
3 PSYC 3073 Research Methods or SOCI 3313 or SCWK 4073
3 LSPN Elective
3 Economics Elective
3 General Elective
15 semester hours

Fall Semester 4
3 HESC 4493 Public Policy Advocacy
3 HESC 4753 Family Financial Management
3 HESC 4453 Parenting and Family Dynamics
3 HESC 4443 Gerontology
3 LSPN Elective
15 semester hours

Spring Semester 4
3 HESC 4433 Dynamic Family Interaction
3 HESC 4443 Gerontology
3 LSPN Elective
6 General Electives
15 semester hours

124 Total Hours

**INTERIOR DESIGN (IDES)**
G. Marie Gentry
Area Coordinator
17B Home Economics Bldg.
479-575-2578

Interior design, a FIDER-accredited program, combines an excellent foundation of professional courses that are enhanced by classes in human environmental sciences, art, architecture, and business. A goal of the program is to foster a sense of personal and professional responsibility and service through design. Students are actively involved in design competitions and domestic and international travel. Both overnight and day field trips are required for studio courses. Elective-credit study tour opportunities are offered on a regular basis, and students are encouraged to participate. Graduates are placed in contract, residential, and institutional interior design firms, architectural firms, historic preservation, lighting design, and contract and residential sales.

Transfer students seeking advanced placement must submit a portfolio for faculty review prior to beginning any studio course. Review of the portfolio will allow appropriate placement based on demonstrated skills and earned college credit. Students may be required to wait for the appropriate studio sequence. Transfer students placed into the program prior to sophomore portfolio review will be required to participate in the sophomore review process.

A sophomore portfolio review is an important component of the academic program. The review of studio work occurs in December of the sophomore year. The submitted materials will follow guidelines prepared by the interior design faculty and will include examples of work from Studios 1, 2, and 3. All full-time interior design faculty review portfolios. Students will receive a pass or probation. If the portfolio is acceptable (pass), the student may continue, without remediation or additional required work, to junior-level studios. If the portfolio is not acceptable (probation), the student must comply with faculty recommendations that may include repeating a course(s), taking supplemental courses to strengthen a weakness, or submission of reworked studio projects. Students on probation must resubmit a portfolio at the end of the spring semester following the initial review. In the event that skills are not improved, the student will not be permitted to progress into upper-level studios.

The studio sequence increases in complexity throughout the curriculum. The rigor of the program requires a significant commitment of time and energy. Students can expect to spend a minimum of 3 hours out of class for each hour of studio time to complete projects. Participation in the supervised internship experience is required for graduation. The faculty reserve the right to retain student work for accreditation and recruitment purposes.

A professional advisory board supports the program and serves as external critics/jurors. Faculty and students participate in professional design association activities. The faculty is composed of well-qualified educators and practitioners who foster an attitude of inquiry and learning based on their individual skills and interests. Intellectual development of students is stimulated and leadership qualities enhanced throughout the four-year curriculum. The student chapter of the American Society of Interior Designers (ASID) allows for interaction with professionals in interior design and allied professions.

In response to industry demands, the program requires laptop computers. Students must acquire a laptop for use in studio courses that are taught in the spring semester of the second year of the program. Specifications for laptops must be obtained from interior design faculty prior to purchase by the student.

**Interior Design Degree Requirements:**

- English/Communications (12 hours)
- English University Core Courses (6 hours)
- ENGL 2003 Advanced Composition or Exemption Elective – See page 41 for exemption information
- COMM 1313 Fundamentals of Communication
- Mathematics University Core Course (3 hours)
- Science University Core Courses (8 hours)
- Fine Arts/Humanities University Core Courses (6 hours)
- Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40
- US History University Core Course (3 hours)
- Social Sciences University Core Courses (9 hours)
PSYC 2003 General Psychology
SOCI 2013 General Sociology
Select 3 hours of economics course: ECON 2013, ECON 2033, ECON 2143, AGEC 1103 or AGEC 2013

**Interior Design Major Requirements**

Art/Architecture (6 hours)
- ARCH 4433 History of Architecture III
- Art Studio Elective: ARTS 1013 Drawing Fundamentals I, ARTS 1313 Two-Dimensional Design, ARTS 1323 Three-Dimensional Design, ARTS 2013 Figure Drawing I, ARTS 2313 Computer Applications in Art, ARTS 3203 Sculpture I, ARTS 3333 Color Studies, ARTS 3363 Graphic Design I

HESC Core (7 hours)
- HESC 1501 Orientation to HESC
- HESC 2853 Textiles for Interior Designers
- HESC 2413 Family Relations

Interior Design Core (55 hours)
- HESC 1031 Introduction to the Profession
- HESC 1034 Studio 1: Design Exploration 1
- HESC 1044 Studio 2: Design Exploration 2
- HESC 2805 Studio 3: Basic Space Planning & Communication
- HESC 2815 Studio 4: Design Programming
- HESC 2823 ID Materials & Resources
- HESC 2883 History of Interior Design
- HESC 3805 Studio 5: Design and Construction
- HESC 3815 Studio 6: Large Scale Commercial
- HESC 3843 Building Systems
- HESC 4805 Studio 7: Comprehensive Design Process I
- HESC 4813 Human Factors in ID
- HESC 4815 Studio 8: Comprehensive Design Process II
- HESC 4823 Professional Procedures
- HESC 4811 Internship for ID

Business Administration (6 hours)
- Select 6 hours from ACCT 2013, FINN 3003 Personal Financial Management, MGMT 3563 Management Concepts and Organizational Behavior, FINN 3933 Real Estate Principles, MKTG 3433 Principles of Marketing
- Non-Credit Requirement: WCOB 1120 Computer Competency
- Non-Credit Elective: WCOB 1120 Computer Competency

General Electives (9 hours)
- HESC 485V Study Tour (1 credit)
- HESC 3841 Portfolio Workshop (1)
- HESC 455V Special Topics – See adviser

124 Total Hours

**Interior Design Nine-Semester Degree Program**

Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

**Fall Semester 1**
1. HESC 1031 Intro to the Profession
4. HESC 1034 Studio 1
1. HESC 1501 Orientation to HESC
3. HESC 2883 History of Interior Design
3. ENGL 1013 Composition I
3. MATH 1203 College Algebra
0. WCOB 1120 Computer Competency Requirement
15 semester hours

**Spring Semester 1**
4. HESC 1044 Studio 2
3. HESC 2853 Textiles for Interior Design
3. PSYC 2003 General Psychology

3. ENGL 1023 Composition II
3. COMM 1313 Fundamentals of Communications
16 semester hours

**Fall Semester 2**
5. HESC 2805 Studio 3
3. HESC 2823 ID Materials & Resources
3. SOCI 2013 General Sociology
3. Social Science Economics Core Elective
14 semester hours

**Spring Semester 2**
5. HESC 2815 Studio 4
3. HESC 3843 Building Systems
3. HESC 2413 Family Relations
3. Fine Arts/Humanities Core Elective
3. General Elective
17 semester hours

**Fall Semester 3**
5. HESC 3805 Studio 5
4. Science Core Elective
3. Business Elective
3. General Elective
15 semester hours

**Spring Semester 3**
5. HESC 3815 Studio 6
3. HESC 4813 Human Factors in ID
3. HESC 4823 Professional Procedures
3. ENGL 2003 Advanced Composition or Exemption Elective
3. Fine Arts/Humanities Core Elective
17 semester hours

**Summer Semester**
1. HESC 4811 Internship for Interior Design

**Fall Semester 4**
5. HESC 4805 Studio 7
3. ARCH 4433 Architectural History III
3. Art Studio Elective
3. History Core Elective
14 semester hours

**Spring Semester 4**
5. HESC 4815 Studio 8
3. General Elective
4. Science Core Elective
3. Business Elective
15 semester hours

124 Total Hours

SEE PAGE 358 FOR HUMAN ENVIRONMENTAL SCIENCES (HESC) COURSES.
MISSION AND OBJECTIVES

The School of Architecture at the University of Arkansas houses professional design programs of architecture and landscape architecture together with liberal studies programs in each discipline. The School’s programs in architecture and landscape architecture include traditional five-year professional degree programs and four-year pre-professional degrees, combining studio design education with innovative teaching in history, theory, technology and urbanism. A broad range of course offerings equips graduates with the knowledge required for the challenges of a changing world. Design instruction occurs in a carefully planned studio sequence, providing educational experiences appropriate for students who wish to pursue both traditional and non-traditional forms of professional practice. Fundamental principles and techniques of critical analysis are stressed, and the curriculum strives to empower students by developing skill, knowledge, and a deep sense of responsibility to the cultures they will serve. Design studio projects survey issues and opportunities in built and natural settings, as well as complex social, physical, and cultural relations that constitute the human-made environment.

FACILITIES AND RESOURCES

The School’s administrative offices and department of architecture are located in Vol Walker Hall, formerly the University’s library building, which has been extensively remodeled to meet the needs of the department and School. The landscape architecture department is located in Memorial Hall, formerly the University’s student union.

The University’s location in Northwest Arkansas, an area experiencing rapid growth and change, affords unusual opportunity to study the impact of urbanization in a rural setting. The School includes as part of its programs field trips, guest lectures, research assignments, and other teaching techniques oriented toward major urban and rural problems as means to broaden the educational base of its students.

Classes are also offered in a variety of settings away from the campus. Options include a semester in the Rome Study Center for Architecture and the Humanities near the Piazza Navona in Rome, Italy; a six-week Landscape Architecture Study Abroad Program to Italy and England in summer; and the Mexico Summer Urban Studio.

University of Arkansas Community Design Center (UACDC)

The School of Architecture provides community service opportunities through the University of Arkansas Community Design Center (UACDC). The Center was founded in 1995 with the support of the Harvey and Bernice Jones Charitable Trust. The Center utilizes students, faculty, and professional staff to provide technical assistance to the towns and communities of the state of Arkansas in such areas as...
School of Architecture

Design Studio

The design studio sequence is the core of each discipline within the School of Architecture. Students spend three afternoons each week in a design studio, with complementary lecture courses. Knowledge from those lectures is expected to inform work produced in design studios. This method is intended to develop and nurture the intellectual and creative skills of students and to allow them to approach problem solving in a disciplined, logical, and analytical manner.

Design professionals must be able to conceptualize responses to project programs, to communicate with clients, to present ideas verbally, and to demonstrate ideas graphically. They also need to maintain technical knowledge of building or ecology and construction technology, must be able to negotiate with contractors and owners to administrate construction, and should be prepared to market their services. In other words, each designer fulfills a multitude of roles, whether practicing alone or as a team member in a large multidisciplinary organization.

The design studio consists of a series of projects of increasing complexity, all requiring three-dimensional problem solving, conceptualization, and final presentation to the studio critic, other faculty members, and fellow students. The amount of material to be covered, the fast pace of assignments, and the presentation of work for faculty and other students combine to produce a highly charged studio atmosphere.

Library Resources

The School of Architecture is served by the Fine Arts Library, a branch of the University Libraries. The collections in the Fine Arts Library include traditional print resources on the visual arts (painting, drawing, sculpture, ceramics, printmaking, and photography), architecture, and landscape architecture. Types of materials include books, exhibition catalogs, reference books, and periodicals. Electronic resources supporting the art, architecture, and landscape architecture programs include Art Index, Avery Index, Bibliography of the History of Art, and Grove Dictionary of Art among others. The Fine Arts Library also maintains course reserves for faculty wishing to place materials on reserve for their classes.

A collection of more than 80,000 slides and 900 videos relating to architecture, architectural history, landscape, and urban design is housed in the School’s C. Murray Smart Media Center, which is located in Vol Walker Hall. Students in the School of Architecture can access digital imaging technology including scanners and digital cameras.

Materials Shop

The School of Architecture has a fully functional and fully staffed wood shop, a computerized router and laser cutters for model and detail production.

Garvan Woodland Gardens

This 210-acre botanical garden located on Lake Hamilton in Hot Springs, Arkansas, is an integral unit of the School of Architecture. The land and endowment were the result of a bequest to the department of landscape architecture in 1985. A master plan outlining future development has been completed and is currently being implemented. The garden includes facilities designed by Fay Jones and Maurice Jennings, and a garden designed by David Slawson. An internship program offers opportunities for summer study and employment.

DEGREES OFFERED

The School of Architecture offers five-year professional programs in architecture and landscape architecture. Each program culminates in a professional degree, the Bachelor of Architecture (B.Arch.) or Bachelor of Landscape Architecture (B. Landscape Arch.).

The Bachelor of Architecture prepares students who aspire to registration and licensure to practice architecture. Architects do more than design and plan buildings. The architect’s unique talents create environments that serve the psychological, economic, and spiritual needs of their clients and communities. Architects help cities and small communities to become safe, healthy, and wholesome places to live. Perhaps most important, architects create, preserve, and inspire beauty in the built environment.

The Bachelor of Landscape Architecture is an accredited five-year first professional degree that prepares students to practice landscape architecture as a licensed professional. The discipline of landscape architecture balances human requirements with landscape concerns. Landscape architects design, plan, and manage the land through understanding the interrelationships among the spirit of place, local ecology, individuals, and communities. They create outdoor spaces and rebuild ecological systems that meet societal needs, protect or enhance the natural environment, and respond to cultural conditions. Design and planning projects span the breadth of the profession to include urban design and town planning, public parks, land conservation, storm water management systems, ecological rehabilitation, historic landscape preservation, private gardens, housing developments, institutional and business campuses, and golf courses.

The School also offers two four-year programs, culminating in non-accredited degrees: the Bachelor of Science in Architectural Studies and the Bachelor of Science in Landscape Architectural Studies. These degrees serve students who, although Interested in the design disciplines, do not aspire to professional practice. The four-year programs are particularly well suited for students who seek careers in allied disciplines, including historic preservation, environmental law, and history of architecture, as well as for students looking forward to graduate education in architecture, landscape architecture and the allied disciplines.

Minors

Students in architecture and landscape architecture may pursue an academic minor in approved degree programs of other colleges on campus, providing they meet the specific requirements for that minor.

SCHOOL ADMISSION REQUIREMENTS

University of Arkansas Department of Architecture Admissions

The University of Arkansas Department of Architecture maintains three distinct tracks of study for entering freshmen to accommodate all students interested in pursuing a degree in architecture. The three tracks of study are designed to foster learning and to build strong foundations for students entering the program with different skill levels and high school backgrounds. Students accepted to the University of Arkansas with the intention to participate in the B.Arch. or B.S. programs in the Department of Architecture will be classified as “Regular Admissions” (Fall/Spring Studio Students or Spring/Summer Studio Students) or “Pre-Architecture Admissions.” Please contact the School’s Advising Center for a complete description of admission requirements.

Fall/Spring Studio

Students must meet all of the following requirements:
- 25 ACT or better
- 3.5 GPA in high school

• 3.5 GPA in high school
• College preparatory curriculum to include physics and an upper level math (Pre-Calculus or higher)

Space in the studio is limited to 70 students with priority given to first year students who meet the March 1 deadline.

Students are reviewed at the end of the fall semester and may continue the program if they meet the following criteria:
• “C” or better in ARCH 1014, Architectural Design I
• “C” or better in PHYS 1044/1040L, Physics for Architects I or an approved equivalent
• Pass ARCH 1212, Design Methods I
• Maintain a 2.0 GPA

Students who do not meet those criteria will receive a letter and be advised accordingly.

**Spring/Summer Studio**

These students meet the University of Arkansas minimum requirements for admission but do not meet the above criteria for fall/spring studio. These students may continue into ARCH 1014, Architectural Design I in the spring if they meet the following criteria:
• “C” or better in PHYS 1044/1040L, Physics for Architects I or an approved equivalent
• Maintain a 2.0 GPA

Students who do not meet these criteria will be delayed until they satisfy the admissions criteria for the Department of Architecture. Students will be reviewed at the end of the spring semester and will not be allowed to continue in the program if they do not meet the following criteria:
• “C” or better in ARCH 1014, Architectural Design I
• Pass ARCH 1212, Design Methods I
• Maintain a 2.0 GPA

**Pre-Architecture Admissions:** Students who are accepted to the University of Arkansas on a provisional basis cannot begin the Fall/Spring or Spring/Summer sequence until the provisions of their admission are met. These are students who have GPAs or ACT scores below the University of Arkansas minimum or have deficiencies in one or more areas (typically math or English). The Pre-Architecture track of study will, in most cases, add one year to their education.

Students follow a specified curriculum based on individual needs and are allowed to enter the design sequence only when their provisions are met and a cumulative GPA of 3.00 is achieved. In addition to the core requirements, students are required to complete several fundamental drawing courses to build a strong foundation for the studio sequence. Please see the School’s Advising Center for additional information regarding the review process, grade criteria, and continuance in the program.

**Architecture Department Transfer Students and International Students:**
• Completion of first semester core courses (English Comp I, survey of calculus or finite mathematics and general education core requirements with a minimum of 12 hours credit and a GPA of 2.67)
• To enter Design I in the fall, students must also meet the same requirements for freshmen admits
• To enter Design I in the spring, students must successfully pass Physics for Architects I with a minimum of C or better, complete survey of calculus or approved math course and maintain a 2.67 GPA overall.

International students must present a TOEFL minimum score of 550 to become eligible for acceptance into the department of architecture. Lack of knowledge or misinterpretation of policies and/or regulations on the part of individual students will not be considered a valid reason for failure to fulfill requirements.

**Transferring from Accredited Schools of Architecture:** Students transferring from an accredited architectural program desiring to have architecture courses reviewed for placement and acceptance will need to submit materials for review. Please contact the School’s Academic Advising Center for a specific list of required materials.

**NOTE:** All students must complete or receive transfer credit for either PHYS 1044/1040L “Physics for Architects I” or PHYS 2013/2011L “College Physics I” and all other first year university core curriculum courses prior to entry into ARCH 2016 “Architectural Design III” or ARCH 2114 “Architectural Technology I.”

Ultimate responsibility for completion of entrance requirements rests with each student. Please contact the School’s Advising Center, for a complete description of admission requirements.

**Admission to the Professional Program in Architecture**

The department of architecture offers prospective students the opportunity to prepare for architectural practice or related endeavors. With this opportunity comes a responsibility for demonstrating a commitment to personal growth and success in the professional program.

Students are admitted to the first year of the architectural curriculum based on criteria established by the University and by the School of Architecture. They are evaluated by grades in course work and by grades each semester for performance and progress in the design studio sequence.

At the completion of the third year of the department of architecture curriculum, including completion of the 35 semester-credit hours of the University’s general education core requirement, students may apply for admission to the Professional Degree Program. Students will be evaluated for admission on the basis of academic performance in the University core and the Architecture curriculum comprising the sub-disciplines of History/Theory, Technology, and Design. Admission requires a majority vote of the Admissions Committee. Students are encouraged to take maximum advantage of the opportunities that professional and free electives provide for pre-professional development, cultivation of specialization in and related to the profession, and/or preparation for graduate education. Students admitted to the professional program will continue in the established studio curriculum sequence and are to complete the final two years of design studio at the UA School of Architecture. At the time of admission, however, the faculty may recommend or approve an alternative course of study that will allow students to pursue an area of concentration other than design in accordance with the letter and spirit of the curricula. Multidisciplinary alternatives may be developed using electives and coursework from business, engineering and other areas applicable to the practice of architecture.

The University Advanced Composition requirement must be completed either by course work or by exemption via an exam, prior to entry into the fifth year of the professional curriculum.

**University of Arkansas Department of Landscape Architecture Admissions**

All students (including freshmen, international, and transfer students) admitted to the University of Arkansas are eligible for participation in the Landscape Architecture program in the School of Architecture. Students who require developmental work because of low ACT or SAT scores or University-administered math placement examinations or who require courses to remove deficiencies may not register for courses carrying LARC departmental designations. Upon completion of required developmental work and maintaining a grade-point average of 2.00 or more on at least 12 credit hours, students may enroll in landscape architecture (LARC) courses. Please refer to “Admission to the Professional Program in Landscape Architecture” for required academic levels for entering the program. Please contact the School’s Advising Center for more information.
Admission to the Professional Program in Landscape Architecture

The Department of Landscape Architecture offers a professional education grounded in liberal arts studies, which prepares students for landscape architecture practice in the private, public, and nonprofit sectors. Successful completion of the program requires commitment to personal growth and excellence.

Students are admitted to the first year of the Landscape Architecture program based upon the established criteria by the University of Arkansas. Academic and professional performance is evaluated by grades in the course work, design studios, and construction labs. After two years in the program, students submit a portfolio of work at the end of the spring semester for application to continue in the professional program. Applicants who have a grade-point average below a 1.67 will not be allowed to continue in the program. Contact department head for specific portfolio submission requirements and schedule of deadlines. All candidates will be notified of their acceptance or rejection in writing, normally by the first of August.

Students will be evaluated on general academic performance and in the Landscape Architectural curriculum as well as professional conduct. All department faculty serve on the admissions committee. Any appeal to the committee’s decision may be made by submitting a letter to the department head one week before the first week of the subsequent fall semester. The appeal will be presented to the entire faculty for consideration and will require the candidate to present their case in person.

Students who fail to gain admission to the Bachelor of Landscape Architecture degree program will be referred to the department head and the School’s academic adviser for appeal procedures and alternative degree programs in the School and the University.

SCHOOL SCHOLARSHIPS

More than 60 awards and scholarships, including both merit and need-based scholarships, are available to students in the School of Architecture. Most are awarded annually on the basis of recommendations made by the Honors and Awards Committee of the School of Architecture. Students must complete three semesters in residence with a minimum of 15 hours per semester to meet eligibility requirements for most scholarships. Only work accomplished since entering the School of Architecture will be considered in determining merit awards based on grade-point averages.

Applications for scholarships are made through the Advising Center. Students must apply by December 1.

STUDENT ORGANIZATIONS

American Institute of Architecture Students

The American Institute of Architecture Students (AIAS) is a national organization whose purpose is “to organize architecture students and combine their efforts to advance the science and art of architecture, to promote excellence in architectural education, training, and practice, and to foster an appreciation of architecture and related disciplines among all persons.” All students in the School’s architecture program are eligible for membership.

American Society of Landscape Architects, Student Chapter

The purpose of the student chapter of the American Society of Landscape Architects is to bring together the landscape architecture students to combine their interests and efforts, to extend their knowledge of the profession of landscape architecture, and to help advance the profession while preparing for a professional career. All students in the School’s landscape architecture program are eligible for membership.

Tau Sigma Delta Honor Society

The Alpha Eta Chapter of Tau Sigma Delta is the only national collegiate honor society recognized in the fields of architecture, landscape architecture, and allied arts. All students of the School are eligible for membership.

Elections to membership are made by the existing membership, subject to approval by the faculty, from fourth-year and fifth-year students maintaining a minimum 3.00 cumulative grade-point average. In addition, leadership, character, and promise of professional merit are considered in making selections.

Construction Specification Institute

Construction Specification Institute (CSI) is a nonprofit technical organization dedicated to the improvement of specifications and building practices in the construction industry through service, education, and research. Founded in 1948, CSI provides a forum for architects, engineers, specification writers, contractors, construction product representatives, students, and others in the construction industry.

SCHOOL ACADEMIC REGULATIONS

Plus/Minus Grading System

The School of Architecture utilizes a plus/minus grading system that assigns numerical values to 12 different grades. These values are used for architecture or landscape architecture courses when grade-point averages are calculated. The 12-step grading system with assigned values is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-</td>
<td>4.00</td>
</tr>
<tr>
<td>A</td>
<td>3.67</td>
</tr>
<tr>
<td>A+</td>
<td>3.33</td>
</tr>
<tr>
<td>B-</td>
<td>3.00</td>
</tr>
<tr>
<td>B</td>
<td>2.67</td>
</tr>
<tr>
<td>B+</td>
<td>2.33</td>
</tr>
<tr>
<td>C-</td>
<td>2.00</td>
</tr>
<tr>
<td>C</td>
<td>1.67</td>
</tr>
<tr>
<td>D-</td>
<td>1.33</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>D+</td>
<td>0.67</td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Academic Policies – Department of Architecture

The following academic policies, beyond the requirements of the University, are applicable to all students in the Department of Architecture.

1. Any student receiving a grade of “D (+/-)” in a pre-professional program studio course is subject to a comprehensive review of their semester’s work by the Design Review Committee. The Design Review Committee may require that the student take the studio, prior to advancing to the next studio in sequence, in order to demonstrate competence for the required materials as evidenced by achieving a grade of “C” (2.00) or better. A student receiving an “F” in design studio must repeat that studio before progressing.

2. Each student’s progress through the Design Studio sequence is monitored and governed by the faculty and subject to a Design Review process.

3. Admission to the Professional Degree Program in the Department of Architecture requires a minimum 2.00 grade-point average in the University Core and each of the sub-disciplines of Architecture: History/Theory, Technology and Design.

4. Enrollment in Architectural Design VII (ARCH 4016) is contingent upon admission to the Professional Program in architecture as described above.

5. Successful completion of the upper level studios of the professional degree program (ARCH 4016, ARCH 4026, ARCH 5016, ARCH 5026) requires demonstration of competence as evidenced by achieving a grade of “C” (2.00) or better in those courses. Failure to achieve this minimum standard will require retaking the studio.

6. Successful completion of Technology VI (ARCH 5162)
requires the demonstration of competence as evidenced by achieving a grade of “C” (2.00) or better. Failure to achieve this minimum standard will require retaking that course.

7. Any student receiving an “I” in a design studio must complete all work necessary to receive a grade prior to the first day of the next studio in the student’s prescribed sequence to be eligible to enroll in that studio.

8. Prior to graduation, a student must present a 2.00 cumulative grade-point average at this institution in all work attempted including the University Core, electives, and in each of the sub-disciplines of Architecture: History/Theory, Technology and Design.

Design Review Procedure – Department of Architecture

Design Review is a process initiated by a faculty member or by a student in order that a committee comprised of studio faculty may review a student’s design work within a studio course. The review process may be used by students to appeal grades and to seek resolution of conflicts with studio faculty in which it is believed there are questions of fairness and equity in the application of the published grading policy of the faculty member. Faculty reviews are predicated upon, but are not limited to, student work that may receive a “D” grade or lower.

Grade appeals initiated by students will occur during the week prior to the start of class in the subsequent semester. Petitions for this review must be made through the Advising Center prior to the scheduled meeting of the Design Review Committee. Grade appeals may be filed as soon as the student receives his or her final grade.

In all cases, the student shall exhibit, at the place and time specified by the Design Review Committee, ALL work assigned and attempted for the studio in the semester under review. Faculty are required to provide appropriate documentation including, but not limited to, the course syllabus, grading policy, and semester assignments. In the case of an appeal, the student is requested to meet with the faculty committee.

The outcome of the Design Review process may include:

1. A recommendation to the faculty member regarding the grade appeal of the student.
2. A requirement for the student to repeat the design studio course and any co-requisite.
3. A recommendation for enrollment in the subsequent studio course, while advising the student of the need to achieve and maintain a cumulative 2.00 (in the studio sequence) for admission to the professional program.

Grade Appeals – Department of Landscape Architecture

Students in the Department of Landscape Architecture may appeal grades in the design studios as well as other professional courses in which it is believed that there are questions of fairness or equity in the application of the published grading policy of the faculty member. Appeals must be made in writing to the department head one week before the first week of the subsequent semester. The appeal will be presented to the entire Landscape Architecture faculty for consideration and may require the students to present their case in person.

Off-Campus Study Requirement

Each student in the professional program in architecture is required to complete an approved off-campus study experience focusing upon complex urban relationships, and fostering cultural diversity. Approved programs in Architecture include a semester in Rome and a summer design studio in Mexico City.

Each student in the department of landscape architecture is required to participate in a summer study in Europe. This program exposes students to urban design and planning approaches. The program takes place after the student’s third year of design studios.

A special international programs fee supports the School of Architecture’s international programs. These fees are assessed to all students participating in the architecture and landscape architecture design studio classes designated in the “Fees and Cost Estimates” section of this catalog. The international program fees offset costs of maintaining off-campus programs that are not a part of the School’s University-funded budget, as well as enhancing student-centered activities. For further information, see notes on related program fees under “Fees and Cost Estimates” for the University.

Ownership of Work

All original work submitted for credit, including design studio projects, becomes the property of the School of Architecture. Students are required to maintain portfolios documenting all academic and design studio work. Digital copies (compact discs) of all work completed In a studio must be submitted to the studio year coordinator in order to receive a grade for the studio.

School Computer Policy

All students enrolled in the School of Architecture are required to supply, by the beginning of the second year, a personal computer matching or exceeding specifications issued by faculty. The specifications, which are updated annually, are available through the Advising Center or at http://www.uark.edu/–archlabs/. A substantial amount of software may be required depending on specific course requirements. The School has two computer labs, one in each department, equipped for output and scanning for digital production. All studios are wired for Internet access.

HONORS PROGRAM

The Departments of Architecture and Landscape Architecture provide opportunities for students of superior academic and creative ability to enhance and enrich their professional and liberal education by participating in the School’s Honors Programs. Please contact the School’s Academic Advising Center for specific information.

Invitation to Join the School of Architecture Honors Program

Students who present a composite ACT score of 28 (or higher) and a high school GPA of 3.5 or higher during admission will be invited to enroll in the University of Arkansas Honors College. Currently enrolled students with the same qualifications majoring in any of the School’s degree programs will be invited to join the School of Architecture Honors Program. All School of Architecture Honors Scholars are required to maintain a minimum cumulative GPA of 3.5 to remain in the program. Architecture Honors Program students who fail to maintain a 3.5 cumulative GPA, will receive a one-semester probation period prior to dismissal from the program.

Continuing students and transfer students may be invited to join the School of Architecture Honors Program if they maintain a cumulative GPA of 3.5 or higher in courses completed at the University of Arkansas by the end of their first semester of study. Every semester, the Architecture Advising Center will apprise the School’s Honors Program Committee of students who have achieved this level of excellence and are eligible to join the Architecture Honors Program. Invitations are extended to students following the semester in which they qualify. Continuing students are encouraged to consult the School of Architecture Honors Committee and the School of Architecture Advising Center before deciding the level of honors distinction they wish to pursue.
Students are expected to complete their projects in one semester and shall meet a schedule of interim requirements established by the Thesis Committee in consultation with the Architecture Honors Committee. Guidelines for topic selection and preparation of the Honors Thesis/Research Project are available from the Architecture Honors Committee.

**Department of Landscape Architecture Honor’s Program Required Course Work**

An honors student in the School of Architecture’s Department of Landscape Architecture is required to take a total of 36 credit hours of honor’s courses within the University and Department requirements for graduation. This course work is summarized as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core or Elective at the Honor’s level</td>
<td>12</td>
</tr>
<tr>
<td>Landscape Architecture Professional Core at the Honor’s level, which may include design studio, construction laboratory, or history classes</td>
<td>9</td>
</tr>
<tr>
<td>Professional Electives, as identified with the Professional Core, at the Honor’s level, which may include coursework within the Landscape Architecture Department or from other University department programs</td>
<td>6</td>
</tr>
<tr>
<td>Honor’s thesis or project as described below</td>
<td></td>
</tr>
</tbody>
</table>

Each Honor’s student shall have a Department faculty advisor who will consult with the student throughout the university experience. The advisor will meet with the student a minimum of two times every fall and spring semester and correspond at least once during the summer. These sessions are venues for students to discuss their academic progress, course work, community service activities, and leadership development opportunities.

Honors courses within the Professional Core may be fulfilled through independent study or additional course work within the History of Landscape Architecture, Contemporary Landscape Architecture, Construction III, and Construction IV.

The student may also select honors work within Design Studio VI or VII. Additional work may include in-depth precedent research and design application(s), and increased design resolution and details, as determined by the studio instructor. In addition, a student may choose, with mutual faculty agreement, an independent studio. This studio option is in addition to the required studios in the professional program and would only be available during the spring or summer semester of the fourth or fifth year.

An Honor’s student will be required to fulfill 6 credit hours of a written academic thesis or thesis design project. For the written thesis option, the student must take a 3-credit-hour professional elective directly related to the thesis topic, and 3 credit hours of Special Projects with student’s thesis adviser or other faculty designee. For the studio thesis option, the student must take an honors-level, 3-credit-hour Senior Project Preparation course and an honors level, 3-credit-hour subsection of Design Studio VIII Senior Demonstration Project entitled “Design Research”. All landscape architecture students in the professional program are required to complete a Senior Demonstration Project. Honors students pursuing the design thesis option are expected to integrate significant research within the design. All honors students are highly encouraged to take a research methods course within the subject or topic area, and scheduled prior to thesis work.
ACCREDITATIONS

The architecture program was founded in 1946 and has been accredited by the National Architectural Accrediting Board (NAAB) since 1958. The landscape architecture program was established in 1975 and has been accredited by the Landscape Architecture Accreditation Board (LAAB) of the American Society of Landscape Architects (ASLA) since 1983. The School holds memberships in the Association of Collegiate Schools of Architecture (ACSA) and the Council of Educators in Landscape Architecture (CELA), organizations comprised of North American schools of architecture and landscape architecture.

In the United States, most state registration boards require a degree from an accredited professional degree program as prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Masters of Architecture and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Master’s degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

The Landscape Architecture Accreditation Board (LAAB) is the sole agency authorized to accredit U.S. professional degree programs in Landscape Architecture. LAAB recognizes the Bachelor of Landscape Architecture, Bachelor of Science in Landscape Architecture, and Masters of Landscape Architecture. It accredits each program every five years, evaluating degree of conformance with established educational standards.

Masters degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Departmental Majors

ARCHITECTURE (ARCH)

Departmental Office
120 Vol Walker Hall
479-575-4945

• University Professor Emeriti Smart
• Professors Blackwell, Goodstein-Murphree, Shannon, Vitale, Wall
• Associate Professors de Noble, Herman, Luoni, Sexton
• Assistant Professors Messadi, Rudzinski, Smith, Terry
• Clinical Assistant Professors Fitzpatrick
• Adjunct Assistant Professors Del Gesso, Piga

Bachelor of Architecture Degree

1. Completion of the following 95-hour professional program:
   Architectural Design
   ARCH 1014, ARCH 1024, ARCH 2016, ARCH 2026, ARCH 3016, ARCH 3026, ARCH 4016, ARCH 4026, ARCH 5016, ARCH 5026

   Architectural Technology
   ARCH 2114, ARCH 2124, ARCH 3134, ARCH 3144, ARCH 4154, ARCH 5162

   History and Theory of Arch.
   ARCH 1212, ARCH 1222, ARCH 2233, ARCH 2243, ARCH 4433

   Professional Practice
   ARCH 5314

2. Completion of the 35-hour general University Core as listed on page 40. In addition, specific requirements are listed below:
   Mathematics
   MATH 2043 or MATH 2053
   Laboratory Science
   PHYS 1044/1040L or PHYS 2013/2011L, required. PHYS 1054/1050L or PHYS 2033/2031L, strongly recommended.

3. Completion of 27 hours of electives, as follows:
   Professional Electives
   Chosen from upper-level courses (courses numbered 3000 or above) taught on the Fayetteville campus in the School of Architecture and allied disciplines. Students participating in the Rome program may present only three hours of elective course work for professional elective credit. All other elective courses will be used to fulfill free elective requirements.

Free Electives

4. A minimum of 157 hours with a 2.00 cumulative grade-point average at this institution both in all work attempted and in all professional course work attempted is required. See Academic Policies.

5. Completion of the University Advanced Composition requirement either by course work or exemption by exam.

6. Participation for at least one semester in an approved international educational experience. (See Off-Campus Study Requirement, page 101.)

NOTE: The hours of any required course from which a student has been exempted will be added to the free elective requirement. No more than three hours of physical education and/or R.O.T.C. may be counted toward a degree. Courses not acceptable toward degree credit include those of a remedial or orientation nature and whose content are considered to be measurably duplicated elsewhere in the curriculum. ENGL 2003 is not counted toward degree credit, nor is ARCH 1003 for Architecture majors.

By following the preceding curriculum, students will meet the state-mandated University Core Requirements. They must also meet all other University requirements for graduation (page 40). We require that transfer students present a minimum of one semester of physics (with laboratories) and strongly recommend a second course in physics as fulfillment of the science requirement in the State Minimum Core. See University Core Requirements, page 40. Physics is preparatory to architectural technology courses; students presenting a different science option may have difficulty in the architectural technology courses.

Sample curriculum for the Bachelor of Architecture degree can be obtained from the School’s Academic Advising Center.

Professional Licensure Degree Requirement

The National Architectural Accrediting Board (NAAB) only accredits professional programs offering the Bachelor of Architecture, which requires a minimum of five years of study, and the Master of Architecture degrees. These professional degrees are structured to educate those who aspire to registration and licensure
to practice as architects. The curricular requirements for awarding these degrees must include three components — general studies, professional studies, and electives. Together these three components comprise a liberal education in architecture and ensure that graduates will be technically competent, critical thinkers who are capable of defining multiple career paths within a changing societal context.

While no four-year degrees are accredited by NAAB, the Bachelor of Science in Architectural Studies degree is an excellent foundation to those who want a foundation in the field of architecture as preparation for either continued education in a professional degree program or for employment in fields related to architecture.

Major Concentration in the History of Architecture and Urbanism

The major concentration in the History of Architecture and Urbanism requires at least 33 semester hours and must include the following:

1. Completion of requirements for admission to the professional program in architecture, including ARCH 2233, ARCH 2243 and ARCH 4433, and presentation of a 3.25 grade-point average.
2. At least nine hours of professional electives in the history and theory of architecture and urbanism. Sample courses in this specialization include the following:
   - American Architecture and Urbanism — select from
     ARCH 4483 Arch. in the Americas
     ARCH 5933 Preservation & Restoration
     ARCH 4023 History of the City in American Art and Culture
     ARCH 4023 American Building
     ARCH 4023 House Culture
     LARC 3413 History of Landscape Architecture
     LARC 4413 Contemporary Landscape Architecture
   Students declaring a specialization in American Architecture may develop an emphasis in Historic Preservation; ARCH 5933 is required for the emphasis.
   - Early Modern (Renaissance and Baroque) Italy — select from
     ARCH 4023 Italian Arch. from the Renaissance to the Present
     ARCH 5493 History of Urban Form
     ARCH 4023 St. Peter’s Basilica
     ARCH 4023 Italian Art and Culture
     ARCH 4023 Arch. of the City, Rome
     LARC 3413 History of Landscape Architecture
   - Modern Architecture and Urbanism — select from
     ARCH 4443 History of Architecture IV
     ARCH 4483 Arch. in the Americas
     ARCH 4023 History of the City in American Art and Culture
     ARCH 4023 House Culture
     ARCH 4023 Italian Architecture from the Renaissance to the Present
     ARCH 4023 Arch. of the City, Rome
     LARC 4413 Contemporary Landscape Architecture
   - Three hours, Methods of Architectural Research Colloquium
   - At least twelve hours of free electives to be selected from the following areas, to include:
     a. At least three hours in upper-level (3000+) art history courses related to the area of specialization.
     b. At least three hours in upper-level (3000+) humanities or social science courses related to the area of specialization; students pursuing the historic preservation emphasis must select ANTH 5023 or ANTH 5443.
     c. Foreign Language requirements to be determined in consultation with adviser. Students who intend to pursue graduate study in architectural history should have competency in at least one foreign language; French and/or German are recommended.
   - At least six hours of research thesis (ARCH 5026, option studio); students pursuing the historic preservation emphasis are strongly encouraged to participate in the UACDC option studio (ARCH 4016 or ARCH 4026). 6. Students considering pursuing the major concentration in History of Architecture and Urbanism are encouraged to fulfill the humanities and social science requirements of the 35-hour University Core with selections from the following courses.
     ARHS 1003 Art Lecture
     WLIT 1113 World Literature I
     WLIT 1123 World Literature II
     CLST 1003 Intro. to Classical Studies, Greece
     CLST 1013 Intro. to Classical Studies, Rome
     WCIV 1003 Western Civilization I
     WCIV 1013 Western Civilization II
     HIST 2003 History of the American People to 1877
     HIST 2013 History of the American People 1877 to the Present
     ANTH 1023 Intro. to Cultural Anthropology
     Any foreign language, 2003 or 2013.

Minor Concentration in the History of Architecture and Urbanism

The minor concentration in the History of Architecture and Urbanism requires at least 18 semester hours and must include the following:

1. Completion of requirements for admission to the professional program in architecture, including ARCH 2233, ARCH 2243, and ARCH 4433.
2. At least nine hours of professional electives in any area of architectural and urban history.
3. Three hours, Methods of Architectural Research Colloquium
4. At least six hours in humanities and/or social science courses related to the minor concentration.
5. The research thesis (ARCH 5026, option studio) is optional for students in the minor; students interested in an historic preservation emphasis are strongly encouraged to participate in the UACDC option studio (ARCH 4016 or ARCH 4026).
6. See Major Concentration list above.

SEE PAGE 318 FOR ARCHITECTURE (ARCH) COURSES

BACHELOR OF SCIENCE IN ARCHITECTURAL STUDIES

The Bachelor of Science in Architectural Studies incorporates course work from the School of Architecture with liberal studies for students with interests that fall outside the parameters of the accredited professional degree program. The architectural studies program provides opportunities for students who wish to prepare for graduate study in an accredited architecture program or in an allied discipline, such as architectural history, historic preservation, urban planning, or construction management, as well as serving students who seek opportunities in related fields that may not require the five-year accredited degree.

Requirements for a Bachelor of Science Degree in Architectural Studies:

1. Completion of the following 35-hour architectural studies program:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 1014, ARCH 1024, ARCH 2016</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Architectural Technology</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>ARCH 2114, ARCH 2124, or LARC 2714, LARC 3723</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>History and Theory of Arch.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1212, ARCH 1222, ARCH 2233, ARCH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2243, ARCH 4433
(Students interested in Landscape Architecture may substitute LARC 3413 for ARCH 2233 or ARCH 2243.)

2. Completion of the following 35-hour general education program:

<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1013, ENGL 1023</td>
<td></td>
</tr>
<tr>
<td>American History or Gov.</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2003 or HIST 2013 or PLSC 2003</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2043 or MATH 2053</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1044/1040L and PHYS 1054/1050L are recommended.</td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Humanities</td>
<td>6</td>
</tr>
<tr>
<td>One course must be elected from the fine arts core; one course from the humanities must be selected from PHIL 2003, PHIL 2103, PHIL 2203, or PHIL 3103.</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>9</td>
</tr>
<tr>
<td>At least three hours should be taken in anthropology, economics, psychology, or sociology; and with not more than two courses taken from any one department to fulfill this requirement. (See University Core Requirements)</td>
<td></td>
</tr>
</tbody>
</table>

3. Completion of the following 21-hour basic program in the arts:

<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1313</td>
<td></td>
</tr>
<tr>
<td>Humanities and Social Sciences</td>
<td>12</td>
</tr>
<tr>
<td>WCV 1003 and WCV 1013, or</td>
<td></td>
</tr>
<tr>
<td>HIST 1113 and HIST 1123</td>
<td></td>
</tr>
<tr>
<td>WLIT 1113 and 3 hours from</td>
<td></td>
</tr>
<tr>
<td>WLIT 1123; a foreign language literature course; CLST 1003; or CLST 1013. (CLST 1003 or CLST 1013 are recommended for architectural studies students.)</td>
<td></td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>6</td>
</tr>
<tr>
<td>A minimum of six hours in courses numbered above 3000 (not including any courses cross-listed with architecture).</td>
<td></td>
</tr>
</tbody>
</table>

4. Completion of the following foreign language requirement:

<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language (depending upon placement)</td>
<td>0-12</td>
</tr>
<tr>
<td>Students must demonstrate proficiency in a single modern or classic language other than English, usually by completing a sequence of four courses (1003, 1013, 2003, 2013). Students meeting the normal admission standard (two years of one foreign language in high school) may expect to satisfy this requirement with fewer courses, depending upon placement. In cases of unusually thorough preparation, or in the case of international students, exemption may be sought from the department of foreign languages.</td>
<td></td>
</tr>
</tbody>
</table>

5. Completion of 21 hours of electives:

<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional electives</td>
<td>12</td>
</tr>
<tr>
<td>At least 6 hours in upper-level (3000 or above) courses taught in the School of Architecture. The remaining professional elective credits may be additional upper-professional elective credits may be additional upper-level courses in the School of Architecture, approved courses in an allied discipline, or courses in another department of the University that contribute to the fulfillment of a recognized minor.</td>
<td></td>
</tr>
</tbody>
</table>

6. A minimum of 124 hours with a 2.00 cumulative grade-point average at this institution both in all work attempted and in course work completed in the School of Architecture.

7. Presentation of at least 40 semester hours in courses numbered 3000 or above or courses in the School of Architecture numbered 2000 with specific course prerequisites.

8. Completion of the University Advanced Composition requirement, either by course work or exemption by exam.

9. Each student graduating in Architectural Studies must write a research/analytical paper in at least one upper-division course in her or his major or minor area.

10. Course work taken to remove course deficiencies assigned during admission or transfer will not be counted toward the degree. Similarly, courses considered to be remedial or developmental will not count toward the degree.

11. Unless exceptions are granted at the time of admission to the University of Arkansas, transfer work in which grades of “D” or “F” were earned will not be allowed toward credit for graduation. See the Admission chapter in this catalog for more information.

**Architectural Studies Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. During the first year, students who have been admitted to the Fall-Spring Design Studio and students who have been to the Spring-Summer Design Studio follow different schedules, both of which are listed below, with the Fall-Spring Studio first and then the Spring-Summer Studio. The second, third and fourth years are identical for both studios.

To take maximum advantage of the opportunities the four-year degree offers for pre-professional development, cultivation of specialization in and related to the field, and/or preparation for graduate study, each candidate for the Architectural Studies degree will work with a faculty adviser to develop a program of study emphasizing the student’s special interests. Architectural Studies candidates may pursue an academic minor. The minor must be in a field other than the major area, and students must notify the department of their intention to minor. An academic minor ordinarily consists of 15-18 hours.

**Prior to Second Year**

PHYS 1044/1040L, PHYS 1054/1050L (or an approved alternate laboratory science in the University Core) and MATH 2043 or MATH 2053 must be completed before students can begin second-year courses in Architecture. Transfers students and change-of-majors seeking exceptions to the sample curriculum will be reviewed on an individual basis.

**FALL-SPRING DESIGN STUDIO**

**Fall Semester 1**

1. 4 ARCH 1014, Design I
2. 2 ARCH 1212, Intro to Environmental Design I
3. ENGL 1013, Composition I
4. HIST 2003 or 2013, American History or PLSC 2003, American Government
5. PHYS 1044/1040L, Physics for Architects I

(Some students may be required to take FYE)

16 or 17 Semester hours

**Spring Semester 1**

1. 4 ARCH 1024, Design II
2 ARCH 1222, Intro to Environmental Design II
3 ENGL 1023, Composition II
3 MATH 2043, Survey of Calculus or MATH 2053, Finite Mathematics
4 Science Core requirement. Recommended: PHYS 1054/1050L,
   Physics for Architects II
16 Semester hours

SPRING-SUMMER DESIGN STUDIO

Fall Semester 1
3 ENGL 1013, Composition I
3 HIST 2003, 2013 History of the American People or PLSC 2003,
   American Government
4 PHYS 1044/1040L, Physics for Architects I
3 Social Science Core
13 Semester hours

Spring Semester 1
4 ARCH 1014, Design I
2 ARCH 1212, Design Methods I
3 ENGL 1023, Composition II
3 MATH 2043, Survey of Calculus or MATH 2053, Finite
   Mathematics
4 Science Core requirement. Recommended: PHYS 1054/1050L,
   Physics for Architects II
16 Semester hours

Summer Session 1
2 ARCH 1024, Design II
2 ARCH 1222, Design Methods II
4 Semester hours

Fall Semester 2
6 ARCH 2016, Architectural Design I
3 ARCH 2233, History of Architecture I
4 ARCH 2114, Architectural Technology I
3 Social Science Core Requirement
16 Semester hours

Spring Semester 2
3 ARCH 2243, History of Architecture II
4 ARCH 2124, Architectural Technology II
3 COMM 1313, Fundamentals of Communication
3 Fine Arts/Humanities Core
16 Semester hours

Fall Semester 3
3 ARCH 4433, History of Architecture III
3 WCIV 1003, Western Civilization I or HIST 1113, World
   Civilization
3 WLIT 1113, World Literature I
3 Social Science Core
3 Foreign Language
15 Semester hours

Spring Semester 3
3 Fine Arts/Humanities Core
3 WCIV 1013, Western Civilization II or HIST 1123, World
   Civilization II
3 WLIT 1123, World Literature II; CLST 1003, Intro to Classical
   Studies: Greece; or CLST 1013, Intro to Classical Studies:
   Rome
3 Foreign Language
3 Free Elective
15 Semester hour

Fall Semester 4
3 Foreign Language
3 Upper-level Arts/Science Elective
3 Free Elective
3 Professional Elective
3 Professional Elective
15 semester hours

Spring Semester 4
3 Upper-level Arts/Science Elective
3 Free Elective
3 Free Elective
3 Professional Elective
3 Professional Elective
15 Semester hours

124 Minimum number of hours required

Architectural Studies degree candidates may pursue an academic
minor. The minor must be in a field other than the major area, and
students must notify the department of their intention to minor. An
academic minor ordinarily consists of 15-18 hours. Specific require-
ments for the minor are given in the section entitled “Majors, Minors,
and Courses of Instruction.” Although students in architectural stud-
ies may choose from any recognized minor offered by the University,
they are encouraged to consider the following fields:

- African-American Studies
- Anthropology
- Art
- Art History
- Business Administration
- Classical Studies
- Communication
- Computer Sciences
- Drama
- Economics
- English
- Environmental Studies
- European Studies
- Gender Studies
- Geography
- History
- Historic Preservation
- Latin-American Studies
- Philosophy
- Psychology
- Political Science
- Sociology

Although foreign study is not required of candidates for the four-
year degree, students in the architectural studies curriculum are
encouraged to participate in the School of Architecture’s off-campus
study programs in Rome and Mexico City. Architectural studies
majors also may take advantage of the community service opportuni-
ties offered through the University of Arkansas Community Design
Center (UACDC).

To take maximum advantage of the opportunities the four-year
degree offers for pre-professional development (cultivation of spe-
cialization in and related to the field, and/or preparation for graduate
study) each candidate for the Architectural Studies degree will work
with a faculty adviser to develop a program of study emphasizing a
student’s special interests.

Sample curriculum for the Bachelor of Science in Architectural
Studies degree can also be obtained from the School’s Advising Center.

LANDSCAPE ARCHITECTURE (LARC)

Departmental Office
231 Memorial Hall
479-575-4907

- Professor Crone
- Associate Professors Beatty, Boyer, Brittenum, Rollet-Crocker
- Assistant Professors Fields
**BACHELOR OF LANDSCAPE ARCHITECTURE DEGREE**

1. Completion of the following 95-hour Professional core: **HOURS**
   - Design and Graphics: 56
     - LARC 1315, LARC 1325, LARC 2113,
     - LARC 2336, LARC 2346, LARC 3356,
     - LARC 3914, LARC 3366 LARC 4376,
     - LARC 4383, LARC 5386
   - Landscape Architecture/History/Theory: 12
     - LARC 1211, LARC 1221, LARC 3413,
     - LARC 4413, LARC 3924
   - Summer Study Abroad: 6
     - LARC 3933, LARC 4123
   - Landscape Architecture Technical Courses: 18
     - LARC 2714, LARC 3723, LARC 3734,
     - LARC 4714
   - HORT 3103
   - Professional Practice: 3
     - LARC 5613
   - 2. Completion of the 35-hour University Core as listed on page 40.
   - As part of the University Core, the department recommends the following:
     - Laboratory Science: 8
       - BIOL 1543/1541L or BIOL 1613/1611L and GEOL 1113/1111L
   - 3. Completion of the following additional general education requirements:
     - Professional Electives: 15
       - Students may select courses from the Departments of Landscape Architecture and Architecture as well as courses in history, geography, horticulture, art, sociology, environmental studies, and business. These courses can be thematically selected to emphasize urban studies, ecological planning, construction management, and land development.
     - Free Electives: 12
       - Students are encouraged to take courses outside the Department to broaden their education.
   - 4. Candidates seeking graduation shall achieve a minimum of 157 hours and a minimum of a “C-“ in each course within the professional curriculum. The remaining balance of hours shall have a minimum of 2.00 cumulative grade-point average.
     - Any student receiving a “D+/-” or below in the professional core shall repeat the course. Any student with a second “D+/-” or below shall be considered for non-continuance in the program as determined by the department head and faculty.
     - To continue in the professional program, the student must submit a portfolio after their second year for faculty review. Please see section “Admission to the Professional Program in Landscape Architecture.”
   - 5. Students in landscape architecture are required to complete the department’s summer study abroad program, after their third year.

**NOTE:** The hours of any required course from which a student has been exempted will be added to the elective requirement. No more than four hours of physical education and/or R.O.T.C. may be counted toward a degree. Courses not acceptable toward degree credit include those of a remedial or orientation nature and whose content are considered to be measurably duplicated elsewhere in the School’s curriculum. ENGL 2003 is not counted toward degree credit nor is LARC 1003 for BLA majors.

By following the preceding curriculum, students will meet the state-mandated University Core Requirements. They must also meet all other University Requirements for graduation (page 40). We strongly recommend that transfer students present eight hours of laboratory science courses selected from botany, biology, geology, and physical science as part of the State Minimum Core.

**Professional Licensure Degree Requirement**

The School’s BLA program is accredited by LAAB, which requires that specific criteria be met in a professional program. This five-year professional program gives its graduates the required prerequisite degree to qualify to take the licensing exam and prepares them for practice.

Forty-four states require licensure for landscape architects. The primary purpose of this licensure is to “protect the health, safety, and welfare of the public.” Most states require that candidates possess an accredited degree in landscape architecture and complete a period of professional experience, working with a licensed landscape architect. Once these requirements are complete, candidates must pass a national, uniform exam, sometimes with additional sections unique to that state. Sample curriculum for the Bachelor of Landscape Architecture degree can be obtained from the School of Architecture Advising Center.

**Bachelor of Science in Landscape Architectural Studies**

The Bachelor of Science in Landscape Architectural Studies program focuses either on landscape architecture studies or on environmental design issues, which serve students who wish to pursue a career in the profession of landscape architecture but do not seek licensure. The program utilizes existing professional courses within the Departments of Landscape Architecture, Architecture and the University to fulfill the required course work. The total number of hours of credit required for graduation is 124.

This degree program opens the opportunity to more individuals who have interests that can further the body of knowledge within the profession. For example, specialist areas are growing in the sub-fields of cultural landscape preservation and documentation, critical analysis of built works, contemporary case-study development, and urban planning and design. This program prepares students for work in private-sector landscape architecture and planning offices, public policy and administration departments, and the not-for-profit sector. Students will be prepared for graduate school and can pursue professional degrees in landscape architecture, urban planning and design, business, and law, and graduate degrees in historic landscape preservation, history, public policy, public administration, and journalism.

**Requirements for a Bachelor of Science in Landscape Architectural Studies**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Landscape Architecture Design: LARC 1315, LARC 1325, LARC 3914, LARC 2113, LARC 2123</td>
</tr>
<tr>
<td>11</td>
<td>Landscape Architecture Technology: LARC 2714 or LARC 4743 or LARC 3723</td>
</tr>
<tr>
<td>3</td>
<td>History and Theory of Landscape Architecture Research thesis preparation: LARC 302V</td>
</tr>
<tr>
<td>3</td>
<td>Communications: COMM 1313</td>
</tr>
<tr>
<td>12</td>
<td>Humanities and Social Sciences: WCIV 1003 and WCIV 1013 or HIST 1113 and HIST</td>
</tr>
</tbody>
</table>

University of Arkansas, Fayetteville

School of Architecture
1123, WLIT 1113 and 3 hours from WLIT 1123 or a foreign language literature course, CLST 1003 or CLST 1013

Arts and Sciences 12

A minimum of twelve (12) hours in courses numbered above 3000 (not including any courses cross-listed in the School of Architecture.

3. Completion of the following foreign language requirement

Foreign Language 0-6

Depending on placement, students must be introduced to a single modern or classic language other than English by completing two courses (1003 and 1013 or 2003 and 2013). Students with two years or more in one foreign language in high school may satisfy this requirement with higher-level course work. In cases of unusually thorough preparation, or in the case of international students, exemption may be sought through the department.

4. Completion of 21 hours of electives

Professional Electives 12

Credits may be from upper-level (3000 or above) courses from the departments of landscape architecture and architecture, sociology, geography, horticulture or other approved courses in an allied discipline or other courses that contribute to the fulfillment of a recognized minor.

Free Electives 9

5. University Core 35

A minimum of 124 hours with a 2.00 cumulative grade-point average at this institution both in all work attempted and in course work completed in the Department of Landscape Architecture and the School of Architecture.

Presentation of at least 40 semesters in courses numbered 3000 or above or courses in the School of Architecture numbered 2000 with specific course prerequisites.

Completion of the University Advanced Composition requirement, either by course work or exemption by exam.

Each student graduating in Landscape Architectural Studies must write a research/analytical paper in at least one upper division course in his or her major or minor areas. Prior to or in association with developing this paper, the student must select a faculty from the Department of Landscape Architecture from whom to take a Special Studies one-credit preparation and review course.

Course work taken to remove course deficiencies assigned during admission or transfer will not be counted toward the degree. Similarly, courses considered to be remedial or developmental will not count toward the degree.

Transfer work in which grades of “D” or “F” were earned will not be allowed toward credit for graduation.

Landscape Architecture Studies Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan while pursuing a Bachelor of Science in Landscape Architectural Studies should see page 42 in the Academic Regulations chapter for university requirements of the program.

**Fall Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ENGL 1013</td>
<td>Composition I</td>
</tr>
<tr>
<td>3 MATH 1203</td>
<td>College Algebra</td>
</tr>
<tr>
<td>3 HIST 2003 or 2003</td>
<td>American History or Government</td>
</tr>
<tr>
<td>1 LARC 1211</td>
<td>Intro to LA Design I</td>
</tr>
<tr>
<td>5 LARC 1315</td>
<td>LA Design I</td>
</tr>
</tbody>
</table>

15 Semester hours

**Spring Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ENGL 1023</td>
<td>Composition II</td>
</tr>
<tr>
<td>3 SOCI 2013</td>
<td>General Sociology</td>
</tr>
<tr>
<td>4 GEOL 1113 or 1111L</td>
<td>General Geology and lab</td>
</tr>
<tr>
<td>1 LARC 1221</td>
<td>Intro to LA Design II</td>
</tr>
<tr>
<td>5 LARC 1325</td>
<td>LA Design II</td>
</tr>
</tbody>
</table>

16 Semester hours

**Fall Semester 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 WLIT 1113</td>
<td>World Literature I</td>
</tr>
<tr>
<td>3 LARC 3413</td>
<td>History of LA</td>
</tr>
<tr>
<td>3 FNAR Core Requirement</td>
<td></td>
</tr>
<tr>
<td>3 LARC 2113</td>
<td>Design Communications I</td>
</tr>
<tr>
<td>3 Free Elective Hours</td>
<td></td>
</tr>
<tr>
<td>1 LARC 302v</td>
<td>(one credit: thesis prep)</td>
</tr>
</tbody>
</table>

15 Semester hours

**Spring Semester 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 COMM 1313</td>
<td>Fundamentals of Communication</td>
</tr>
<tr>
<td>4 BIOL 1543 or 1541L</td>
<td></td>
</tr>
<tr>
<td>3 LARC 2123</td>
<td>Graphic Communication II</td>
</tr>
<tr>
<td>3 LARC 4413</td>
<td>Contemporary Landscape Architecture</td>
</tr>
<tr>
<td>3 Arts and Sciences 3000+ level course</td>
<td></td>
</tr>
</tbody>
</table>

16 Semester hours

**Fall Semester 3**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 HUMN Core Requirement</td>
<td></td>
</tr>
<tr>
<td>3 WCIV 1003 or HIST 1113</td>
<td></td>
</tr>
<tr>
<td>4 LARC 3914</td>
<td>Planting Design I</td>
</tr>
<tr>
<td>3 FLAN 1003 Requirement</td>
<td></td>
</tr>
<tr>
<td>3 Arts and Sciences 3000+ level course</td>
<td></td>
</tr>
</tbody>
</table>

16 Semester hours

**Spring Semester 3**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 LARC 1003</td>
<td>The American Landscape</td>
</tr>
<tr>
<td>3 WCIV 1013 or HIST 1123</td>
<td></td>
</tr>
<tr>
<td>3 FLAN 1013 Requirement</td>
<td></td>
</tr>
<tr>
<td>3 Arts and Sciences 3000+ level course</td>
<td></td>
</tr>
<tr>
<td>3 Social Science Core Requirement</td>
<td></td>
</tr>
</tbody>
</table>

15 Semester hours

**Fall Semester 4**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 WLIT 1123 or FLAN Lit Course</td>
<td></td>
</tr>
<tr>
<td>3 Free Elective</td>
<td></td>
</tr>
<tr>
<td>3 Professional Elective</td>
<td></td>
</tr>
<tr>
<td>3 Professional Elective</td>
<td></td>
</tr>
<tr>
<td>3 Arts and Sciences 3000+ level course</td>
<td></td>
</tr>
</tbody>
</table>

15 Semester hours

**Spring Semester 4**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Professional Elective</td>
<td></td>
</tr>
<tr>
<td>3 Professional Elective</td>
<td></td>
</tr>
<tr>
<td>3 Free Elective</td>
<td></td>
</tr>
<tr>
<td>3 Social Science Core Requirement</td>
<td></td>
</tr>
<tr>
<td>4 LARC Construction Requirement</td>
<td></td>
</tr>
</tbody>
</table>

16 Semester hours

124 Minimum total hours required

Landscape Architectural Studies candidates may pursue an academic minor. The minor must be in a field other than the major area, and the students must notify the department of their intention to minor. An academic minor ordinarily consists of 15-18 hours, which are dictated by the department of the minor. Students in Landscape Architecture Studies Eight-Semester Degree Program
Architectural Studies may choose from any recognized minor offered by the University; however, they are encouraged to consider the following fields:

Public Policy, History, Geography, and Horticulture, and further encouraged to consider cross-disciplinary study in African-American Studies, Anthropology, Art, Art History, Business Administration, Classical Studies, Communication, Computer Sciences, Economics, English, European Studies, Gender Studies, Latin-American Studies, Philosophy, Political Science, Psychology and Sociology.

Although foreign study is not required for candidates in Landscape Architectural Studies, students in the curriculum are encouraged to participate in the School of Architecture’s off-campus study programs in Rome and Mexico City. Community planning projects are offered through the University of Arkansas Community Design Center (UACDC).

To take maximum advantage of the opportunities of the four-year degree program, each student in the Landscape Architectural Studies program shall work with the department head to develop a program of study emphasizing special interests, to cultivate a specialization related to the field, and to guide preparation for graduate study, if desired.

SEE PAGE 373 FOR LANDSCAPE ARCHITECTURE (LARC) COURSES
J. William Fulbright
College of Arts and Sciences

Office of the Dean of the College
525 Old Main
479-575-4804

Dean
Donald R. Bobbitt

Associate Deans
Charles H. Adams
John G. Hehr

Assistant Deans
Adam K. Motherwell
Lisa J. Summerford

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479-575-4801

Advising Center
Dave Dawson, Director
101 Old Main
479-575-3307

Honors Studies
Sidney Burris, Director
517 Old Main
479-575-2509

World Wide Web:
http://fulbright.uark.edu/

E-mail: arscinfo@uark.edu

MISSION AND OBJECTIVES

No one in 20th century America has done more to advance the study of international relations or promote human understanding than J. William Fulbright. Committed to the idea that a free society and a peaceful world require, above all, an educated citizenry, he urged with unflagging energy the use of historical perspective, cultural relativity, and scientific objectivity in the study of human affairs. Senator Fulbright, like Thomas Jefferson, Andrew Jackson, and Abraham Lincoln before him, was committed to the belief that an educated, enlightened electorate will unerringly act not only in its own self-interest but also in the interest of all the people of the world.

In recognition of J. William Fulbright’s contribution to the cause of liberal education and of his many services to his native state, the Board of Trustees of the University of Arkansas on November 20, 1981, resolved...

The College of Arts and Sciences at the University of Arkansas, Fayetteville, shall be named, henceforth, the J. WILLIAM FULBRIGHT COLLEGE OF ARTS AND SCIENCES. His name will imbue that college, and the University, with his reputation and image for a devoted interest in higher education and its accomplishments through its scholars as reflected in its students. That name will endow the college in such a way as to make it a worldwide center for liberal learning in the general and for the study of international relations in particular.

The college, dedicated to implementing the Fulbright philosophy that liberal education is a prerequisite for enlightened citizenship in a democratic society, has adopted as its mission the following statement from Fulbright’s writings:

...the highest function of higher education ... is the teaching of things in perspective, toward the purposes of enriching the life of the individual, cultivating the free and inquiring mind, and advancing the effort to bring reason, justice, and humanity into the relations of men and nations.

Consisting of 19 departments and 22 special programs and research centers, Fulbright College has a twofold mission: to provide a broad, liberal education to all students within the University community and to furnish specialized knowledge at the upper division and graduate levels leading to a professional career. The general education curriculum within the college is designed to assure students’ mastery of the English language, provide knowledge of the historical, social, intellectual, and linguistic bases of human culture, provide habits of thought and investigation useful in later life, encourage exploration and
development of aesthetic, political, and ethical values, and offer the
necessary foundation for professional competence or further training
in professional or graduate schools. The general education curriculum
of the college is based on the Platonic assumption that the pursuit of
knowledge is an intrinsically good activity and that it is incumbent
upon all members of an enlightened society to engage in that pursuit.

Recognizing that its students must become productive members of
contemporary American society, Fulbright College offers undergradu-
ate majors in 43 different fields ranging from chemistry and art to
journalism and German. In addition, the college, in cooperation with
the Graduate School, offers course work leading to master’s degrees
in 32 fields and doctoral degrees in 11 fields. As a natural corollary
of their instructional role, the faculty of the college pursue active
research programs in their fields and programs that enable them
simultaneously to provide state-of-the-art education to their students
and bring national and international recognition to the University.

In sum, Fulbright College lies at the very heart of the University.
The seat of liberal learning within the institution and the state, it is
committed to providing excellent general education to all members
of the student body and specialized instruction of the highest quality
to its own majors.

FACILITIES AND RESOURCES

Academic Advising Services

The Fulbright College of Arts and Sciences provides an adviser for
each student enrolled in the college. Freshmen and sophomore level
students are advised in the Fulbright Advising Center in Old Main
518. All undeclared major students and all freshmen declared major
students doing a four-year honors program receive advising from the
Fulbright Honors Program office in Old Main 517. The faculty of
each department within Fulbright College assumes responsibility for
advising junior and senior-level students who have declared majors
in the department and those who have declared current interest in the
department as a possible major area. Other advisory services exist to
provide aid and direction to students who are non-degree candidates
as well as those who are beginning work in the college without hav-
ing yet decided on a major and those who are planning to attend pro-
fessional schools such as those for medicine or pharmacy. Advisers
in the Fulbright Advising Center will assist students in program
planning and will help them to become aware of and familiar with
the academic offerings of the University. Students should consult
their advisers on a regular basis, not limited to registration matters
but including all areas of their academic careers. Personnel in the
Fulbright Advising Center or the Dean’s office will direct students to
the appropriate advising office.

Students should discuss with their advisers opportunities for individual
variations as well as regular course requirements, etc. Programs and
facilities of particular interest to individuals may include the Honors
Program, programs for Advanced Placement and Credit by Examination,
and the services of the University Career Development Center.

The Career Development Center administers and interprets tests
indicative of individual ability, interest, and achievement, and thus
may aid also in counseling students about the field of study in which
they are most likely to be effective and successful.

For questions regarding advising, contact the Fulbright Advising
Center at 575-3307 or visit online at www.uark.edu/~fcac/.

DEGREES OFFERED

For a complete list of departmental majors, minors, concentrations,
options and coursework, see the chart on pages 112 and 113.

The J. William Fulbright College of Arts and Sciences offers
four-year curricula leading to the degrees of Bachelor of Arts (B.A.),
Bachelor of Science (B.S.), Bachelor of Fine Arts (B.F.A.), and
Bachelor of Music (B.M.). Each candidate for the B.A. and B.S.
degrees selects a major field for specialized study. In addition to
usual departmental majors there are interdepartmental majors and
special programs for students preparing for professional degrees in
law, medicine, dentistry, and teaching.

MAJORS AND MINORS

Majors

American Studies  German
Anthropology  History
Art  International Relations
Biology  Journalism
Chemistry  Mathematics
Classical Studies  Music
Communication  Philosophy
Computer Science (B.A.)  Physics
Criminal Justice  Public Administration
Drama  Social Work
Earth Science  Sociology
Economics  Spanish
English
French
Geography

Minors

African-American Studies  Historic Preservation
Anthropology  History
Art  Japanese
Art History  Latin American Studies
Biology  Legal Studies
Business  Mathematics
Chemistry  Medieval and Renaissance Studies
Classical Studies  Middle East Studies
Communication  Music
Computer Science  Philosophy
Drama  Physics
Economics  Political Science
English  Psychology
European Studies  Religious Studies
French  Social Work
Gender Studies  Sociology
Geography  Spanish
Geology  Statistics
German

FULBRIGHT COLLEGE
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<th>Minor Concentration or Option</th>
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* Indicates majors that are “second,” “dependent,” or “combined.” See each program for more details.
FULLBRIGHT COLLEGE OF ARTS AND SCIENCES

Fulbright College also recognizes all official minors offered by sister colleges at the University of Arkansas. Students wishing to have such minors made a part of their transcript must notify the Fulbright College dean’s office (MAIN 525) when degree application is made.

OTHER PROGRAMS

Undergraduate Preparation for Professional Programs

The Fulbright College of Arts and Sciences offers courses that are required for the study of law, medicine, dentistry, teaching, pharmacy, social work, and other professions. It provides supporting programs in the humanities, fine arts, social sciences, and natural sciences for students who are enrolled for professional programs in other undergraduate colleges on the campus and for those students who may plan to enter postgraduate professional programs in other colleges.

In some instances it may be possible for a student to plan the use of undergraduate courses so that the time required for completion of a postgraduate professional program may be shortened by as much as one full year. Currently, this may be done for the Master of Social Work program. For information and advice concerning this program see the Director or Associate Director of the School of Social Work.

Teacher Education Programs: Acceptance in a teacher education program is governed by regulations approved by the University Teacher Education Board for Initial Licensure and administered by the College of Education and Health Professions and the Fulbright College of Arts and Sciences. Students in Fulbright College can pursue teacher licensure in the following areas: Art, Drama/Speech, Physical/Earth Science, or Social Studies. Students in all subject areas, except Art and Music, must meet the entrance requirements for the Master of Arts in Teaching (M.A.T.) degree, which include completion of a baccalaureate degree in the subject area, completion of additional licensure requirements (if any) in subject area, completion of M.A.T. course requirements and a minimum 2.70 grade point average. See below for specific requirements in each subject area.

Interested students should contact the appropriate advisers early in the planning of such programs.

Teacher Education Programs: Acceptance in a teacher education program is governed by regulations approved by the University Teacher Education Board for Initial Licensure and administered by the College of Education and Health Professions and the Fulbright College of Arts and Sciences. Students in Fulbright College can pursue teacher licensure in the following areas: Art, Drama/Speech, Physical/Earth Science, or Social Studies. Students in all subject areas, except Art and Music, must meet the entrance requirements for the Master of Arts in Teaching (M.A.T.) degree, which include completion of a baccalaureate degree in the subject area, completion of additional licensure requirements (if any) in subject area, completion of M.A.T. course requirements and a minimum 2.70 grade point average. See below for specific requirements in each subject area.

Students intending to obtain teacher licensure in Art or Music will follow the requirements set forth in the Bachelor of Fine Arts degree program. (All course requirements are subject to change. Students must meet current requirements at the time of application for graduation.)

Interested students should contact the appropriate advisers early in the planning of such programs.

Teacher Education Programs: Acceptance in a teacher education program is governed by regulations approved by the University Teacher Education Board for Initial Licensure and administered by the College of Education and Health Professions and the Fulbright College of Arts and Sciences. Students in Fulbright College can pursue teacher licensure in the following areas: Art, Drama/Speech, Physical/Earth Science, or Social Studies. Students in all subject areas, except Art and Music, must meet the entrance requirements for the Master of Arts in Teaching (M.A.T.) degree, which include completion of a baccalaureate degree in the subject area, completion of additional licensure requirements (if any) in subject area, completion of M.A.T. course requirements and a minimum 2.70 grade point average. See below for specific requirements in each subject area.

Interested students should contact the appropriate advisers early in the planning of such programs.

Teacher Education Programs: Acceptance in a teacher education program is governed by regulations approved by the University Teacher Education Board for Initial Licensure and administered by the College of Education and Health Professions and the Fulbright College of Arts and Sciences. Students in Fulbright College can pursue teacher licensure in the following areas: Art, Drama/Speech, Physical/Earth Science, or Social Studies. Students in all subject areas, except Art and Music, must meet the entrance requirements for the Master of Arts in Teaching (M.A.T.) degree, which include completion of a baccalaureate degree in the subject area, completion of additional licensure requirements (if any) in subject area, completion of M.A.T. course requirements and a minimum 2.70 grade point average. See below for specific requirements in each subject area.

Interested students should contact the appropriate advisers early in the planning of such programs.
through the department of political science. Students considering a career in law may consult the UA School of Law Catalog or the Fulbright College Advising Center for information concerning certain categories of courses that may be helpful to the study and practice of law. Students uncertain about a major degree program should contact the Fulbright Advising Center.

A baccalaureate degree is required for admission to the UA School of Law, except for those students in the Fulbright College of Arts and Sciences who are admitted to the special six-year program referred to in the paragraph immediately following. All applicants for admission are required to take the Law School Admission Test. (See page 277.)

The University of Arkansas School of Law at Fayetteville and the Fulbright College of Arts and Sciences jointly administer a six-year program whereby highly qualified students may earn both the bachelor’s degree and the Juris Doctor degree. Any student enrolled in the J. William Fulbright College of Arts and Sciences during a spring semester shall be permitted to matriculate in the School of Law in the following fall semester if the admission complies with Section 1 of Part A of the law school’s admission policies and if the student meets the following conditions:

1. At least 30 consecutive hours of course work in Fulbright College.
2. At least 94 hours credited toward a bachelor’s degree by Fulbright College.
3. Completion of Fulbright College’s requirements for a major in connection with the bachelor’s degree.
4. A cumulative grade-point average in all college or University course work of at least 3.50, without grade renewal,
5. An LSAT score of at least 159.

A student may substitute law school course work for the remaining total hours required for the bachelor’s degree from Fulbright College. Formal application for the degree should be made to the Registrar.

Information about the program may be obtained in the dean’s office or the Fulbright Advising Center.

**Health Related Professions**

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<td>ALLIED HEALTH PRE-PROFESSIONAL PROGRAMS:</td>
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<td>Cytotechnology</td>
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<td>Physical Therapy</td>
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<td>Podiatry</td>
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For additional information about these and other allied health professions, contact the Fulbright Advising Center, 518 Old Main, 479-575-3307, or e-mail: fac@ cavern.uark.edu, Web site: http://www.uark.edu/~fac/.

**General:** Each of the above areas involves the completion of a minimum number of semester hours and certain required courses. Many of the specific course requirements are common to all programs, and it is in the student’s best interest to complete these requirements as early as possible. Careful scheduling is essential to ensure that courses are taken in proper sequence.

**Pre-Chiropractic Program:** Students entering the pre-chiropractic program should determine the specific admission requirements for the school(s) of their choice at an early date. Most chiropractic colleges require a minimum of 90 hours of college credit to include the following: 6 hours of English, 12 hours chemistry (with a minimum of 3 hours inorganic chemistry and at least 6 hours organic chemistry and/or biochemistry), 8 hours of biology, 3 hours of psychology, 15 hours of social science or humanities, and 8 hours of physics.

All students planning careers in chiropractic should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

**Pre-Dental Program:** All dental schools require a minimum of three years of college work, and most schools give preference to applicants who have completed a baccalaureate degree. The minimum requirements for admission to most dental schools can be met at the University of Arkansas by completing the following courses: ENGL 1013, ENGL 1023, BIOI 1543/1541L plus 4 additional hours of biology PHYS 2013/2011L, PHYS 2033/2031L, and CHEM 1103/1101L, CHEM 1123/1121L, CHEM 3603/3601L, CHEM 3613/3611L.

Mathematics is not a general requirement, but students are expected to have a background equivalent to college algebra and trigonometry. Students who complete a minimum of 90 hours of work may qualify for the combined degree program provided that they complete the requirements for graduation in Fulbright College of Arts and Sciences.

All dental schools require the Dental Admissions Test. It is suggested that applicants take the DAT one year prior to the time they plan to enter dental school. A student planning a career in dentistry should contact Dr. J.C. Rose, Department of Anthropology, 479-575-2508.

**Pre-Medical Program:** Medical schools in general require a minimum of 90 semester hours of college credit exclusive of military science and physical education, and most recommend that the student complete a baccalaureate degree. All medical schools have specific course requirements, and the student should determine those requirements for the school or schools of his or her choice. The minimum requirements for most medical schools can be met by completion of the following courses:

ENGL 1013, ENGL 1023, or equivalent
BIOI 1543/1541L, plus one other course in biological sciences, or equivalent
CHEM 1103/1101L, CHEM 1123/1121L, CHEM 3603/3601L, CHEM 3613/3611L
MATH 1203 and MATH 1213, or MATH 2554
PHYS 2013/2011L and PHYS 2033/2031L, or PHYS 2054 and PHYS 2074.

CLEP credit is not accepted.

Additional courses are recommended. Special opportunities and experiences are available to pre-medical students through the Liebolt Endowment.

Pre-medical students are encouraged to complete the requirements for the B.A. or B.S. degree. As part of these requirements the student must choose a major, but the choice of a major has no direct bearing upon admission to medical school and should reflect the particular interests of the student. If a student is admitted to a medical school prior to completion of the baccalaureate degree requirements, he/she may wish to take advantage of the combined degree program in medical science. If that program is elected, the student should complete all of the basic University and college requirements for graduation during residence on the UA campus.

Most medical schools require the Medical College Admissions Test (MCAT), which is given in the spring and fall at the University. The MCAT normally should be taken in the spring preceding application to medical school. Admission to medical school is highly competitive, and a good grade-point average is demanded. A grade-point average of 3.30 is the minimum likely to receive favorable consideration. A grade of “D” in any course required by the medical school is not considered satisfactory. Advising is available through Dr. Neil Allison, Department of Chemistry and Biochemistry, 479-575-5179, and Dr.
Jeanne McLachlin, Department of Biological Sciences, 479-575-5348. Dr. Allison serves as chair of the University of Arkansas Pre-medical Advisory Committee. For information, visit the University of Arkansas pre-medical Web site at http://www.uark.edu/premeded/

**Pre-Optometry Program:** Admission requirements to schools and colleges of optometry are not uniform. Typically they include courses in English, mathematics, physics, chemistry, and biology. Some colleges and schools have specific requirements in psychology, social sciences, literature, philosophy, and foreign languages. Students in this program should determine the specific requirements of the school or college they wish to attend at an early date and plan their program of study accordingly. Details concerning the program are available from the Fulbright Advising Center, 479-575-3307, 518 Old Main.

**Pre-Pharmacy Program:** Entrance requirements for pharmacy schools vary, therefore students should research the schools of their choice to determine specific prerequisite course work.

The University of Arkansas for Medical Sciences College of Pharmacy requires 65 hours of pre-professional courses to include: 4 hours of calculus, 9 hours of English/Communication, 16 hours of chemistry, 8 hours of biology, 4 hours of physics, 3 hours of economics, 6 hours of critical thinking/problem solving, and humanities to total 65 hours.

Students are advised to begin taking humanities electives during the second semester of their freshman year. Since pharmacy schools have many more applicants than they can accept, the student is urged to earn a grade-point average somewhat higher than the minimum of 2.00.

Grades are a major consideration when admission committees evaluate a student’s qualifications for acceptance. The University of Arkansas College of Pharmacy and other pharmacy schools also require applicants to take the Pharmacy College Admission Test (PCAT). This may be taken in November or February. See the pre-pharmacy adviser for details.

The pre-pharmacy adviser for the University of Arkansas is Lorraine Brewer, Department of Chemistry and Biochemistry, 479-575-3103.

**Pre-Dentistry Program:** To meet entrance requirements for colleges of dentistry, an applicant must have completed a minimum of three years at an accredited undergraduate institution, however, most entering students have completed a baccalaureate degree. Courses required for admission vary with the college, and a student should inquire early in the academic program about the courses required for a particular institution. In general, a student is advised to include at least 8 hours of general chemistry, 8 hours of organic chemistry, 8 hours of physics, 8 hours of biology, and 6 hours of English. Additional information concerning requirements for specific colleges of dentistry may be obtained from Dr. Neil Allison, Department of Chemistry and Biochemistry, 479-575-5179.

**Pre-Cytotechnology Program:** Requirements for the University of Arkansas for Medical Sciences College of Health Related Professions program in cytotechnology include 20 hours of biology, 8 hours of chemistry, 3 hours of college algebra, 6 hours English composition, 6 hours of Western civilization, 3 hours in American history or national government, 3 hours in the humanities, 6 hours in the social sciences, 3 hours of communication, 3 hours fine arts, and 24 hours of electives for a total of 85 hours. At least 5 of these elective hours must be upper-level.

All students planning careers in cytotechnology should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

**Pre-Dental Hygiene Program:** Students entering the pre-dental hygiene program should determine the specific requirements for admission to the schools of their choice at an early date. Entrance requirements for the dental hygiene program at the University of Arkansas for Medical Sciences College of Health Related Professions consist of a minimum of 37 hours of college credit to include the following courses: 4 hours of biological science, 4 hours of microbiology, 4 to 5 hours of chemistry, 3 hours of mathematics, 6 hours of English, 3 hours of speech communication, 3 hours of sociology, 3 hours of psychology, 3 hours of computer science, and 3 hours of U.S. history or U. S. government. Students wishing to earn the B.S. degree in dental hygiene through the College of Health Related Professions must include: 6 hours of Western civilization, 3 hours of fine arts, 3 hours of humanities, and 12 hours of upper-level electives.

All students planning careers in dental hygiene should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

**Pre-Diagnostic Medical Sonography Program:** Students entering this program should determine the specific admission requirements for the school of their choice at an early date. The admission requirements for the diagnostic medical sonography program at the University of Arkansas for Medical Sciences College of Health Related Professions consist of a minimum of 63 semester hours to include: 6 hours of English, 4 hours of human anatomy, 4 hours of human physiology, 4 hours of introductory physics, 3 hours of communication (speech), 3 hours of college algebra, 3 hours of U.S. history, 6 hours of history of civilization, 3 hours of sociology, 3 hours of psychology, 3 hours of fine arts, 3 hours of humanities, 3 hours of computer fundamentals/applications, and 8-10 hours of electives.

All students planning careers in diagnostic medical sonography should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

**Pre-Medical Technology Program:** Students entering this program should determine the specific admission requirements for the school of their choice at an early date. The admission requirements for Medical Technology at the University of Arkansas for Medical Sciences College of Health Related Professions are as follows:

A minimum of 69 semester hours to include 6 hours of English, 8 hours of general chemistry, 16 hours of biology (4 hours of introductory biology, 4 hours of microbiology, 4 hours of human physiology, and 4 hours of biology electives), 3 hours of communication (speech), 3 hours of fine arts, 6 hours of Western civilization, 3 hours of college algebra, 3 hours of U.S. history, 6 hours of other social sciences (two different fields), 3 hours of humanities, and 12 hours of electives.

All students planning careers in medical technology should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

**Pre-Nuclear Medicine Technology Program:** Students who wish to attend a program in nuclear medicine technology should determine the specific requirements for admission to the schools of their choice. Admission requirements for the University of Arkansas for Medical Sciences, College of Health Related Professions, include completion of the courses listed below or their equivalents plus enough electives to bring the total to 85 hours.

Course requirements for admission are as follows: 4 hours of anatomy, 4 hours of physiology, 8 hours of general chemistry, 4 hours of general physics, 3 hours of college algebra or higher-level mathematics, 6 hours of English, 3 hours of speech communication, 3 hours of fine arts, 6 hours of Western civilization, 3 hours of U.S. history, 6 hours of social sciences, 3 hours of humanities, and at least 8 hours of upper-level credits. It is recommended that elective courses be in math and science, technical writing, computers, and health sciences.

All students planning careers in nuclear medicine technology should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

**Pre-Occupational Therapy Program:** Students entering the pre-occupational therapy program should determine the specific requirements for admission to the schools of their choice at an early date. The admission requirements for occupational therapy at the University of Central Arkansas consist of a minimum of 72 hours of college credit to include the following courses: 6 hours of English, 3 hours of world literature, 3 hours of fine arts, 3 hours of health education, 3 hours of U.S. history or government, 3 hours of humanities, 3 hours of mathematics, 2 hours of medical terminology, 6 hours of
Western civilization, 3 hours of communication (speech), 15 hours of biology (must include a course in both anatomy and physiology), 4-5 hours of chemistry, 4 hours of physics, 6 hours of psychology (including 3 hours of statistics), 3 hours of sociology, an additional 3 hours of either sociology or psychology electives, and 3 hours of developmental psychology (HESC 1403 Life Span Development can meet this requirement).

All students planning careers in occupational therapy should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

Pre-Ophthalmic Medical Technology Program: Admission requirements for ophthalmic medical technology at the University of Arkansas for Medical Sciences College of Health Related Professions consist of a minimum of 55 credit hours to include: 4 hours of anatomy, 4 hours of physiology, 4 hours of microbiology, 9 hours of biology electives, 4 hours of physics, and 3 hours of college algebra (or higher level mathematics). General education courses: 6 hours of English composition, 6 hours of history of civilization/world history, 3 hours of American history or national government, 6 hours of social science, 3 hours of speech communication, 3 hours of fine arts, and 3 hours of humanities.

All students planning careers in ophthalmic medical technology should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

Pre-Physical Therapy Program: Students planning to attend physical therapy school should determine the specific admission requirements for schools of their choice at an early date.

Admission requirements for the Doctor of Physical Therapy program at the University of Central Arkansas requires completion of a baccalaureate degree to include the following: 4 hours of general biology, 4 hours of human anatomy, 4 hours of human physiology, 4 hours of microbiology, 3 hours of introductory neuroscience (physiological psychology at the University of Arkansas), 4 hours of histology, 8 hours of chemistry, 8 hours of physics, 3 hours of computer literacy, 3 hours general psychology, 3 hours psychology elective, 3 hours of statistics, 2 hours of medical terminology, and 3 hours of technical writing.

Any student planning a career in physical therapy should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

Pre-Radiologic Technology: Students interested in radiologic technology should determine the specific admission requirements for the school of their choice at an early date. The admission requirements for the radiologic technology program at the University of Arkansas for Medical Sciences College of Health Related Professions consist of a minimum of 32 semester hours to include the following: 6 hours of English, 4 hours of human anatomy, 4 hours of human physiology, 3 hours of communication (speech), 3 hours of college algebra, 3 hours of U.S. history, 3 hours of sociology, 3 hours of psychology, and 3 hours of computer fundamentals/applications.

All students planning careers in radiologic technology should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

Pre-Respiratory Care Program: Students who wish to enter the B.S. Degree program in Cardio-Respiratory Care in the College of Health Related Professions at the University of Arkansas for Medical Sciences must satisfactorily complete the courses listed below. The applicant must also complete the Health Occupation Aptitude Exam (administered by the department) as part of the application procedure. The B.S. program is available in Texarkana and in Little Rock.

Prerequisite requirements consist of a minimum of 66 hours, including the following: 4 hours anatomy, 4 hours physiology, 4 hours microbiology, 8 hours chemistry, 4 hours physics, 3 hours computer fundamentals, 3 hours college algebra, 3 hours speech, 6 hours English composition, 3 hours American history or U.S. government, 6 hours history of Western civilization or world history, 3 hours fine arts, 3 hours humanities, 3 hours sociology, 3 hours psychology, and 11 hours electives.

All students planning careers in Respiratory Care should contact the Fulbright Advising Center, 518 Old Main, 479-575-3307.

Cooperative Education

The Cooperative Education program Kremmentz, is designed to offer students an opportunity to participate in a paid work experience directly related to their academic major. It resembles an internship, but includes a series of at least two such work experiences. The program also insists that at least minimal academic credit be awarded, thus ensuring that the work experience will be directly related to the student’s academic program. Cooperative Education offers advantages to students needing assistance in financing their education, and it offers the college a tangible way to demonstrate our conviction that although we do not stress vocational or professional training per se, there is nothing inimical between a liberal arts education and the world of work. Prerequisites include 45 credit hours, a cumulative GPA of 2.50, and consent of academic coordinator. A maximum of 4 credit hours of ARSC 310 (Cooperative Education) may be applied toward the student’s degree.

Detailed information about Cooperative Education may be obtained from the Office of the Dean, Fulbright College, 525 Old Main, or from the Career Development Center, 607 Arkansas Union.

COLLEGE ADMISSION REQUIREMENTS

Students seeking admission to the J. William Fulbright College of Arts and Sciences must meet the general requirements for admission to the University. In addition, students are expected to present two units (years) of a single modern foreign or classical language. Those unable to meet this standard will be expected to begin their collegiate foreign language study as soon as possible after matriculation. For these students, the first semester of language study will be considered to satisfy the admission deficiency and will not count toward the 124 hours required for graduation (although the course will appear as University credit, and the grade received will be computed in the grade-point average). For the students who meet the Fulbright College of Arts and Sciences admission requirements and continue with the same foreign language taken in high school, the first semester of language study will be considered remedial and will not count toward the 124 hours required for graduation (although the course will appear as University credit and the grade received will be computed in the grade-point average). Students transferring from other colleges at the University of Arkansas or from other institutions are expected to meet the same entrance standard.

COLLEGE SCHOLARSHIPS

Foremost among scholarships available in the J. William Fulbright College of Arts and Sciences is the Sturgis Fellowship. This scholarship enables Fulbright College to offer to outstanding graduates of secondary and preparatory schools undergraduate fellowships valued at $50,000 for four collegiate years.

Continuing students may also compete for the J. William Fulbright Prize for Distinction in the Liberal Arts. This scholarship carries a $1000 award.

Students studying in the humanities or classics may qualify for the Elizabeth W. Fulbright Scholarship. This award is for students who are at least juniors and is intended to support a year of study abroad.

The Robbin C. Anderson Scholarship is available to students who place in the top 10% of their class and who transfer to Fulbright College from an Arkansas community or junior college.

Freshman students who show outstanding promise may receive awards from the James Victor Spencer, Jr. Memorial Scholarship, and students with similar promise or records are eligible for the Marion A. Steele Memorial Scholarship.
In addition, students may compete for general scholarship monies, which are awarded, regardless of classification, to students with the highest grade-point averages. Application for these monies is made through the Office of the Dean, 525 Old Main. Students may also obtain information and an application on the Web through Fulbright College of Arts and Sciences Scholarships and Fellowships at http://www.uark.edu/~arsc/students/scholarships.html.

Other scholarships are available from the departments of Fulbright College. Information may be sought from the departmental chairperson of the student’s major and/or the Fulbright College Scholarships and Fellowships Web site listed above.

STUDENT ORGANIZATIONS

There are many general-interest societies and organizations to which students may belong, and nearly every department of the University maintains an honor society through which high scholarship is rewarded. Students in Fulbright College may aspire to membership in the following organizations:

- Alpha Chi Sigma (chemistry)
- Alpha Epsilon Delta (pre-medical, medical technology, pre-dental)
- Alpha Kappa Delta (sociology)
- Alpha Psi Omega (drama)
- American Chemical Society (chemistry)
- Delta Phi Alpa (German)
- Eta Sigma Phi (Greek and Latin)
- Gamma Theta Upsilon (geography)
- Kappa Kappa Psi (band, men)
- Kappa Tau Alpha (journalism)
- Lambda Pi Eta (communication)
- Lambda Tau (writers)
- Omicron Delta Epsilon (Economics)
- Phi Alpha Theta (history)
- Phi Beta Delta (international scholarship)
- Phi Beta Kappa (arts and sciences)
- Phi Kappa Phi (biology)
- Phi Mu Alpha (music, men)
- Pi Delta Phi (French)
- Pi Kappa Delta (forensics)
- Pi Mu Epsilon (mathematics)
- Pi Sigma Alpha (political science)
- Psi Chi (psychology)
- Sigma Alpha Iota (music, women)
- Sigma Delta Pi (Spanish)
- Sigma Gamma Epsilon (geology)
- Sigma Pi Sigma (physics)
- Tau Beta Sigma (band, women)

COLLEGE ACADEMIC REGULATIONS

Courses of study in the Fulbright College of Arts and Sciences are designed to give students the comprehensive view of society that the modern world requires. Students who enroll in Fulbright College, or who elect some of its courses, have an opportunity to gain a broad cultural education, which is a part of intelligent living and, at the same time, to prepare for professions or to acquire technical training in the sciences. The college has two major teaching functions: to provide basic general education in the arts and sciences necessary to all persons for effective participation in the complex world in which we live; and, second, to furnish the student an opportunity to specialize in the field of the student’s choice.

To implement the first of these aims and to furnish a broad base for the accomplishment of the second, the faculty of Fulbright College has adopted the requirements listed below for each degree.

Specific course requirements may be fulfilled in one of four ways:
1. Establishing credit in approved courses:
   a. by enrolling in and completing the required work in the course,
   b. by examination (credit will be entered as CR on a student’s record as explained in Advanced-Standing Programs, page 47),
   c. by advanced achievement, i.e., by satisfactory completion of a more advanced course of a sequence. For example, students who earn a grade of “C” or better in a third-semester foreign language course may be granted credit for the second semester course upon recommendation of the Foreign Language Department and approval by the Dean of the college. (This does not apply to work taken by correspondence or in transfer.)
2. Gaining exemption by examination. Announced exemption examinations are routinely offered in several courses. Students may consult any department or the dean’s office concerning exemption examinations.
3. Advanced placement by examination. A student who is granted advanced placement may elect to substitute a more advanced course for the listed required course.
4. Transfer credit. Students presenting transfer credit in lieu of stated requirements may be asked to present official course descriptions, etc. Transfer work with grades of “D” or “F” will not be accepted.

DEGREE COMPLETION PROGRAM POLICY

Fulbright College of Arts and Sciences Graduation Requirements

In addition to the specific course requirements for the degree plan and major, be aware that there are general graduation requirements that every student in Fulbright College must complete.

1. Minimum Total Semester Hour Requirement
   - B.A., B.S., B.M. Degrees: 124 hours
   - B.F.A.: 128 hours
2. Residency Requirement
   a) 30 Hour Rule (University Requirement)
      - The full senior year must be completed in residence except that a senior who has already met the minimum residency requirement will be permitted to earn not more than 12 of the last 30 hours in extension or correspondence courses.
      - No more than 30 semester hours of correspondence courses or in residence at another accredited institution granting the baccalaureate degree. No more than six of these 12 hours may be correspondence courses.
      - The minimum residence requirement is 36 weeks and 30 semester hours. Residency for the senior year is defined as a period during which the student must be enrolled in courses offered on the campus in Fayetteville. This is intended to provide adequate contact with the University and its faculty for each student who is awarded a degree. Colleges and departments have the authority to prescribe residence requirements that exceed those described here.
   b) 24 Hour Rule (College Requirement)
      - A student graduating from Fulbright College must have completed at least 24 hours of 3000 and 4000 level courses from departments in Fulbright College.
3. 40-Hour Rule
   - Students must present for degree credit at least 40 hours of work in courses numbered 3000 and above. Included in this 40 hours can be courses numbered 2000 if each has a specific course designated as a prerequisite. (The following courses are excluded: MILS 2001 and 2011, AERO 2001 and 2011, and foreign language courses numbered 2003 and 2013.) These courses may be taken from other colleges or universities. However, do not forget
the college residency requirement, specifically the 24 hour rule.

4. Grade-Point Average
Students graduating from Fulbright College must have a minimum cumulative GPA of 2.00.

5. “D” Rule
If a student has grades of “D” in more than 25 percent of the hours presented for graduation credit, she/he will not be allowed to graduate.

6. Eight Hour Rule
Students may submit no more than eight semester credit hours from the following list of course alpha codes. These may be used for degree credit only with the specific recommendation of the adviser.

- AERO Aerospace Studies*
- AGED Agricultural and Extension Education
- DEAC Dance Education Activity*
- ETEC Educational Technology
- EXED Extension Education
- HLSC Health Science
- ITED Industrial/Technical Education
- MILS Military Science*
- PEAC Physical Education Activity*
- PHED Physical Education
- RECR Recreation
- VOED Vocational Education

*No more than four of the eight hours may be applied from AERO, MILS, PEAC, or DEAC (combined). See page 120 #4

7. 68-Hour Rule
Students who transfer into the University may present for degree credit no more than 68 hours of lower division course work (1000 and 2000 level).

8. Writing Requirement
Students graduating from Fulbright College must write a research/analytical paper for at least one upper-division course in his or her major. Each department has determined its own procedures for certifying completion of this requirement. Questions should be referred to the departmental chairperson. A student may choose to write a senior thesis in a major area of study. The thesis may be accorded up to six hours of credit. Defense of the thesis before a committee is required. Satisfactory completion of an honors project or a senior thesis may be submitted to meet the college writing requirement.

Questions concerning fulfilling the requirements should be referred to the student’s adviser or to the dean’s office, which will maintain current lists of approved courses, experimental offerings approved to fulfill requirements for a specified period of time, examination schedules, and other options available to the student.

A student who has earned at least 50 percent of his or her college credits at the University of Arkansas and has maintained a grade-point average of at least 3.80 through the semester preceding graduation shall earn the distinction of “Fulbright College Senior Scholar.”

In addition to completing one of the sets of degree requirements listed below, a student must also complete the University Requirements for Graduation, including the University Core requirements (see page 40).

### DEGREE REQUIREMENTS

**Bachelor of Arts**

<table>
<thead>
<tr>
<th>HOURS</th>
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</thead>
<tbody>
<tr>
<td>1. A total of 124 semester hours.</td>
</tr>
<tr>
<td>2. University Core:</td>
</tr>
<tr>
<td>ENGL 1013, ENGL 1023, Composition I, II</td>
</tr>
</tbody>
</table>

### Advanced Composition Requirement (see page 41)

HIST 2003, HIST 2013, or PLSC 2003

### 3. College Requirements

**Fine Arts:** six hours to include at least two different arts to be selected from the following nine courses:

- ARTS 1003 or ARHS 1003 (except for art majors)
- DRAM 1003 (except for drama majors)
- COMM 1003
- MLIT 1003
- ANC 1003
- ARCH 1003 or LARC 1003
- HUMN 1003

**Foreign Language (Depending upon placement)**

Students must demonstrate proficiency in a single modern or classical language other than English, usually by completing a sequence of four courses (1003, 1013, 2003, 2013). The first semester of foreign language study (1003) is normally considered remedial and, thus, does not apply toward the 124 hours needed for graduation.

Students meeting the normal admission standard (two years of one foreign language in high school) may expect to satisfy this requirement with fewer courses, depending upon placement. In cases of unusually thorough preparation, or in the case of international students, exemption may be sought from the Department of Foreign Languages.

**Phil 2003 or Phil 2103**

**MATH 1203 and one of the following four courses:**

- MATH 2043, MATH 2053, or MATH 2183
- MATH 2554

**Natural Sciences with Laboratory**

At least 4 hours must be biological science, and at least 4 hours must be physical science. It is strongly recommended that students take an 8-hour sequence in one of the natural sciences, to be selected from the following:


**Four to eight hours in the biological sciences may be selected from the following courses:**

- ANTH 1013/1011L
- BIOL 1543/1541L
- BIOL 1613/1611L
- BIOL 2013/2011L or BIOL 1603/1601L

**Four to eight hours in the physical sciences may be selected from:**

- ASTR 2003/2001L
- CHEM 1053/1051L
- CHEM 1103/1101L
- CHEM 1123/1121L
- GEOL 1113/1111L
- GEOL 1133/1131L
- PHYS 1023/1021L
- PHYS 2013/2011L
- PHYS 2033/2031L
- PHYS 2054
- PHYS 2074
Social science, to be selected from: 6
ANTH 1023
ECON 2013, ECON 2143
GEOG 2103, GEOG 2203
PLSC 2013
PSYC 2003
SOCI 2013, SOCI 2033
at least 3 hours must be taken in
anthropology, economics, psychology, or
sociology, with not more than one course taken
from any one department
COMM 1313 3
WCIV 1003, WCIV 1013 or HIST 1113, 6
HIST 1123
WLIT 1113 and 3 hours to be chosen from WLIT
1123, a foreign language literature
course, any other world literature course, CLST
1003, or CLST 1013

4. Completion of the requirements for one of the majors described
in the section titled Majors and Courses of Instruction.
Second or dual majors may be chosen from the following fields:
- African-American Studies
- European Studies
- Latin American Studies
- Middle East Studies
- Russian Studies

See page 121 for the combined academic and medical degree.
See page 111 for minors.

5. Presentation of at least 40 semester hours in courses numbered
3000 and above or courses numbered 2000 with specific course
prerequisites excluding MILS 2002, MILS 2012, AERO 2011,
AERO 2021, and foreign language courses numbered 2003 and
2013. At least 24 of the 40 hours must be in courses numbered
above 3000 and taken in Fulbright College.

6. Unless exceptions are granted at the time of admission to the
University of Arkansas, transfer work in which grades of "D" or
"F" were earned will not be allowed toward credit for graduation.
For more information, see the Admissions chapter in this catalog.

7. If the student’s degree program is strengthened by course work
in the following departments, as many as eight hours may be
applied toward the degree with the consent of the adviser:
AERO 4-
HLSC 6-
PHED 5-
DEAC 3-
ITED 3-
RECR 0-
EXED 6-
MILS 3-
UNIV 3-
ETEC 4-
PEAC 5-
VOED 0-

No more than four of the eight hours may be applied from
AERO, MILS, PEAC, or DEAC, unless a student completes
an ROTC program and receives a commission. Upon receipt of
notification in the dean’s office of completion of ROTC pro-
gram and receipt of commission, up to 16 hours of AERO or
MILS may be applied toward the student’s degree.

8. Each student graduating from Fulbright College must write a
research/analytical paper for at least one upper-division course
in his or her major. Satisfactory completion of an honors project
or a senior thesis may fulfill this requirement. Students should
consult with their major adviser for departmental procedures in
satisfying this requirement.

9. Course work taken to remove course deficiencies assigned at
the time of admission or transfer will not be counted toward the
degree. Similarly, courses considered to be remedial or develop-
mental will not count toward the degree.

10. Those courses constituting the State Minimum Core of 35 hours
for the University of Arkansas are set forth on page 40 of this
catalog. These courses, or courses transferred with a grade of
“C” or better from any other state institution in Arkansas, may
be used in partial or full satisfaction of the Fulbright College
general education core.

**Bachelor of Science**

<table>
<thead>
<tr>
<th>HOURS</th>
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<tbody>
<tr>
<td>1. A minimum of 124 semester hours. (Departments may require additional hours up to a total of 132.)</td>
</tr>
<tr>
<td>2. University Core:</td>
</tr>
<tr>
<td>ENGL 1013, ENGL 1023, Composition I, II 6</td>
</tr>
<tr>
<td>Advanced Composition Requirement (see page 41) 0-3</td>
</tr>
<tr>
<td>HIST 2003, HIST 2013, OR PLSC 2003 3</td>
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<tr>
<td>3. College requirements:</td>
</tr>
<tr>
<td>Foreign language  (Depending upon placement) 0-9</td>
</tr>
</tbody>
</table>
| Students must demonstrate proficiency in a single modern or classical language other than English, usually by completing a sequence of three courses (1003, 1013, 2003). The first semester of foreign language study (1003) is normally considered remedial and, thus, does not apply toward the 124 hours needed for graduation. Students meeting the normal admission standard (two years of one foreign language in high school) may expect to satisfy this requirement with fewer courses, depending upon placement. In cases of unusually thorough preparation, or in the case of interna-
tional students, exemption may be sought from the Department of Foreign Languages. |
| World language, foreign literature, philosophy 9 |
| (to be selected from PHIL 2003, PHIL 2103, PHIL 2203), fine arts (to be selected from at least two areas) |
| WCIV 1003, WCIV 1013 or HIST 1113, 6 |
| HIST 1123 |
| Social sciences, to be selected from: |
| ANTH 1023 3 |
| ECON 2013, ECON 2143 |
| GEOG 2103, GEOG 2203 |
| PSYC 2003 |
| SOCI 2013 |
| Science and mathematics 18 |
| (to be determined by the department of major and to be selected from at least two departments other than the department of the major). |
| 4. Completion of the requirements for one of the majors described in the section entitled Degree Programs and Courses. Majors may be chosen in the following fields: |
| Biology |
| Chemistry |
| Earth Science |
| Geology |
| Mathematics |
| Physics |
| Public Administration |
| See page 121 for the combined academic and medical degree. |
| See page 111 for minors. |
| 5. Presentation of at least 40 semester hours in courses numbered 3000 and above or courses numbered 2000 with specific course
prerequisites excluding MILS 2002, MILS 2012, AERO 2011,
AERO 2021, and foreign language courses numbered 2003 and
2013. At least 24 of the 40 hours must be in courses numbered
above 3000 and taken in Fulbright College. See also College
Requirements on page 119. |
| 6. See item #6, page 119. |
Bachelor of Fine Arts

1. A minimum of 128 semester hours.

2. University Core:
   - ENGL 1013, ENGL 1023, Composition I, II 6
   - Advanced Composition Requirement (see page 41) 0-3
   - HIST 2003 or 2013 or PLSC 2003 3

3. College requirements:
   - Natural Sciences 8
     - 4 hours to be selected from
       - PHYS 1023/1021L
       - CHEM 1053/1051L
       - ASTR 2003/2001L
       - GEOL 1113/1111L
     - 4 hours to be selected from
       - ANTH 1013/1011L
       - BIOL 1543/1541L
       - BIOL 1613/1611L or
       - BIOL 1603/1601L
   - Social sciences, to be selected from:
     - ANTH 1023
     - ECON 2013, ECON 2143
     - GEOG 2103, GEOG 2203
     - PHIL 2003, PHIL 2103
     - PSYC 2003
     - SOCI 2013, SOCI 2033
     - with at least 3 hours in anthropology, economics, psychology, or sociology, and with not more than one course taken from any one department. PSYC 2003 is required for art education majors.
   - Foreign language (Depending upon placement) 0-9
     - Students must demonstrate proficiency in a single modern or classical language other than English, usually by completing a sequence of three courses (1003, 1013, 2003). The first semester of foreign language study (1003) is normally considered remedial and, thus, does not apply toward the 124 hours needed for graduation. Students meeting the normal admission standard (two years of one foreign language in high school) may expect, depending upon placement. In cases of unusually thorough preparation, or in the case of international students, exemption may be sought from the Department of Foreign Languages.
     - COMM 1313 or PHIL 2203 or an additional foreign language
   - COMM 1313 is required for art education majors.
   - MATH 1203
   - WCIV 1003, WCIV 1013 or HIST 1113, HIST 1123
   - WLIT 1113, WLIT 1123

4. Presentation of at least 40 semester hours in courses numbered above 3000 and taken in Fulbright College. See also College Requirements on page 118.

5. See item #6, page 119.

Bachelor of Music

1. A minimum of 124 semester hours.

2. University Core:
   - ENGL 1013, ENGL 1023, Composition I, II 6
   - Advanced Composition Requirement (see page 41) 0-3
   - HIST 2003, HIST 2013, or PLSC 2003 3

3. College requirements:
   - Foreign language (Depending upon placement) 0-6
     - Students must demonstrate proficiency in a single modern or classical language other than English, usually by completing a sequence of two courses (1003, 1013). The first semester of foreign language study (1003) is normally considered remedial and, thus, does not apply toward the 124 hours needed for graduation. (For a major emphasis in voice, 9 hours additional is required in two different foreign languages appropriate to vocal repertoire. See Music Department requirements.)
   - WLIT 1113, World literature 3
   - MLIT 1003, Fine arts 3
   - Natural sciences 8
     - (to be selected from the courses listed under the natural science requirements for the B.A. degree – 4 hours must be from biological science area, and 4 hours must be from physical science area).
     - WCIV 1003, WCIV 1013 or HIST 1113, HIST 1123
     - MATH 1203
   - Social sciences to be selected from:
     - ECON 2013, ECON 2143
     - GEOG 2103, GEOG 2203
     - PHIL 2003, PHIL 2103
     - PSYC 2003
     - SOCI 2013, SOCI 2033
     - ANTH 1023

4. Completion of the requirements for one of the majors described in the section entitled Majors and Courses of Instruction. Major fields of specialization may be chosen from the following: Applied Music (performance areas are specified under Courses of Instruction), Music Theory, Composition, Music Education.

5. Presentation of at least 40 semester hours in courses numbered above 3000 and above or courses numbered 2000 with specific course prerequisites excluding MILS 2002, 2012, AERO 2011, 2021, and foreign language courses numbered 2003 and 2013. At least 24 of the 40 hours must be in courses numbered above 3000 and taken in Fulbright College. See also College Requirements on page 118.

6. See item #6, page 119.

7. See item #7, page 119.
8. See item #8, page 119.
9. See item #9, page 119.
10. See item #10, page 119.

Combined Academic and Medical or Dental Degree

Fulbright College offers both the Bachelor of Arts and Bachelor of Science degrees in medical science or medical science (dentistry). A student may substitute the first year of regular medical or dental work taken in any standard, approved medical or dental school for
To earn the distinction of Departmental Scholar Cum Laude at graduation, a student must successfully complete requirements prescribed by the major department, including an honors thesis and oral examination, maintain a minimum grade-point average of 3.25, and take 12 hours (which may include six hours of thesis) in Honors Studies. If a student demonstrates superior academic performance or an exceptionally high level of scholarly activity, the Honors Council may award the distinction of Magna Cum Laude. In exceptional instances where truly outstanding work within the major field is coupled with the superior understanding of its relationship to the college work as a whole, the distinction Summa Cum Laude may be awarded.

For more information about Honors Studies within Fulbright College, visit the web site at www.uark.edu/honors.

Degrees with Honors

The J. William Fulbright College of Arts and Sciences is dedicated to providing students a liberal education in the arts, humanities, and sciences. Such an education should be soundly based, innovative, and enriched by a creative faculty. This is especially true for students with superior academic ability or artistic talent. To achieve these aims, the college faculty has developed and participates in the Fulbright College Scholars Program and the Departmental Honors Program.

Requirements for the Fulbright College Scholars Program: Credit or exemption for University Core in English composition, including ENGL 1013, ENGL 1023, and ENGL 2003, and in American history or American government, completion of the requirements for departmental honors in a department or study area of the college, including preparation and oral defense of an honors thesis, a cumulative grade-point average of 3.25 or above, and completion of the honors core curriculum. Students who do not have at least a 3.25 GPA will not be allowed to graduate with honors.

Requirements for Departmental Honors: Specific academic requirements including course work, participation in departmental honors colloquia or seminars, and independent study projects are established by the faculty of the individual departments or study areas and are approved by the Honors Council. However, all departmental honors students must have a 3.25 cumulative grade-point average, complete and defend an honors thesis, and take 12 hours (which may include six hours of thesis) in Honors Studies. Information concerning these requirements is given within each department’s catalog listings.

The following outlines the minimum academic requirements of the honors core curriculum for the B.A., B.S., B.M., and B.F.A. degree programs.

Honors Core Curriculum

Bachelor of Arts Degree

<table>
<thead>
<tr>
<th>Humanities Option</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Civilization</td>
<td>6</td>
</tr>
<tr>
<td>HIST 1113H, HIST 1123H</td>
<td></td>
</tr>
<tr>
<td>World Literature</td>
<td>6</td>
</tr>
<tr>
<td>WLIT 1113H, WLIT 1123H</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2003H</td>
<td></td>
</tr>
<tr>
<td>Fine Arts</td>
<td>6</td>
</tr>
<tr>
<td>Select from the following: ARCH 1003H, ARHS 1003H, COMM 1003H, DANC 1003H, DRAM 1003H, HUMN 1003H, WLIT 1003H</td>
<td></td>
</tr>
<tr>
<td>Colloquia in Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Must be selected from two different areas of humanities. Course offerings vary each semester. See adviser.</td>
<td></td>
</tr>
</tbody>
</table>
Humanities Option 2
Honors Roots of Culture
HUMN 1114H, HUMN 1124H, HUMN 2114H, HUMN 2124H

Philosophy
PHIL 2003H

Fine Arts
Select from the following:
ARCH 1003H, ARHS 1003H, COMM 1003H, DANC 1003H, DRAM 1003H, HUMN 1003H, MLIT 1003H

Colloquia in Humanities
Successful completion of HUMN 2124H waives one 3-hour Humanities Colloquium requirement.
Course offerings vary each semester. See adviser.

Students pursuing either option must also complete the following:

Social Science
Select from the following:

Colloquium in Social Sciences
Must be selected from two different areas of social sciences. Course offerings vary each semester. See adviser.

Foreign Language: (depending upon placement) 0-12
See your adviser. Students must demonstrate proficiency in a single modern or classical language other than English, usually by completing a sequence of four courses (1003, 1013, 2003, 2013). See Fulbright College Admission Requirements (page 117). Students meeting the normal admission standard (two years of high school language) may expect to satisfy this requirement with fewer courses, depending upon placement. In cases of unusually thorough preparation, or in the case of international students, exemption may be sought from the department of foreign languages.

Natural Science and Mathematics: 12-16
Twelve hours of honors credit, with a minimum of eight in the laboratory sciences. See adviser for specific science course listing. Additionally, Fulbright Scholars must fulfill the math requirement of MATH 2043 OR MATH 2053 OR MATH 2554. Although not required as honors courses, MATH 2053 or MATH 2554 may, when taken in honors sections, satisfy up to four hours of the required 12 hours of honors credit in the mathematical and natural sciences.

Colloquium in Natural Science or Math 3
To be selected in an area outside the student’s departmental major. Course offerings vary each semester. See adviser.

Bachelor of Science Degree

Humanities Option 1
World Civilization
HIST 1113H, HIST 1123H

Fine Arts, World Literature, Philosophy
Must be selected from two different areas.

Fine Arts
ARCH 1003H, ARHS 1003H, COMM 1003H,

Humanities Option 2
Honors Roots of Culture
HUMN 1114H, HUMN 1124H, HUMN 2114H

Philosophy
PHIL 2003H

Colloquium in Humanities
Course offerings vary each semester. See adviser.

Students pursuing either option must also complete the following:

Social Science
Select from the following:

Colloquium in Social Sciences
Course offerings vary each semester. See adviser.

Foreign Language: (depending upon placement) 0-9
See your adviser. Students must demonstrate proficiency in a single modern or classical language other than English, usually by completing a sequence of three courses (1003, 1013, 2003). Students meeting the normal admission standard (two years of high school language) may expect to satisfy this requirement with fewer courses, depending upon placement. In cases of unusually thorough preparation, or in the case of international students, exemption may be sought from the department of foreign languages.

Natural Science and Mathematics: 18
Eighteen hours of honors credit to be selected from at least three departments. At least one class must be from Mathematics, though not necessarily at the Honors level. See adviser for specific science course listing.

Colloquium in Natural Science or Math 6
Must be selected from two different areas of the natural sciences and mathematics. Course offerings vary each semester. See adviser.

Bachelor of Music Degree

Humanities Option 1
World Civilization
HIST 1113H, HIST 1123H

World Literature
WLIT 1113H

Fine Arts
MLIT 1003H

Colloquium in Humanities
Course offerings vary each semester. See adviser.
### Humanities Option 2

**Honors Roots of Culture**  
HUMN 1114H, HUMN 1124H, HUMN 2114H  

**Fine Arts**  
MLIT 1003H  

**Colloquium in Humanities**  
Students pursuing Humanities Option 2 who complete the fourth semester of Honors Roots Culture (HUMN 2124H) will receive a 3-hour waiver for the Humanities Colloquium requirement. Otherwise, they must choose course work from the humanities colloquia course listing. Course offerings vary each semester. See adviser.

**Students pursuing either option must also complete the following:**  
- **Foreign Language:** (depending upon placement)  
  - See your adviser.
- **Social Science**  
  - Select from the following.  
- **Natural Sciences:**  
  - Eight hours of honors credit to be chosen from the lab sciences. See adviser for specific science course listing.
- **Mathematics:**  
  - Fulbright Scholars must fulfill the math requirement of MATH 2043 or MATH 2053 or MATH 2554.

### Bachelor of Fine Arts Degree

**Hours**

<table>
<thead>
<tr>
<th>Humanities Option 1</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Civilization</td>
<td>6</td>
</tr>
<tr>
<td>HIST 1113H, HIST 1123H</td>
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</tr>
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<td>World Literature</td>
<td>6</td>
</tr>
<tr>
<td>WLIT 1113H, WLIT 1123H</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2003H</td>
<td></td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Select from the following.</td>
<td></td>
</tr>
<tr>
<td>COMM 1003H, DANC 1003H, DRAM 1003H, HUMN 1003H, MLIT 1003H</td>
<td></td>
</tr>
<tr>
<td><strong>Colloquia in Humanities</strong></td>
<td>6</td>
</tr>
<tr>
<td>Must be selected from two different areas of humanities. Course offerings vary each semester. See adviser.</td>
<td></td>
</tr>
</tbody>
</table>

**Humanities Option 2**

<table>
<thead>
<tr>
<th>Honors Roots of Culture</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMN 1114H, HUMN 1124H, HUMN 2114H, HUMN 2124H</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2003H</td>
<td></td>
</tr>
<tr>
<td><strong>Colloquia in Humanities</strong></td>
<td>6</td>
</tr>
<tr>
<td>Completion of HUMN 2124H waives one 3-hour Humanities Colloquium requirement. Course offerings vary each semester. See adviser.</td>
<td></td>
</tr>
</tbody>
</table>

**Students pursuing either option must also complete the following:**  
- **Foreign Language:** (depending on placement)  
  - See your adviser.
- **Social Science**  
  - Select from the following.

### Graduate Studies

The Graduate School, in cooperation with the faculty of Fulbright College of Arts and Sciences, offers work leading to the graduate certificate or to the degrees of Master of Arts, Master of Science, Master of Music, Master of Fine Arts, Master of Public Administration, Master of Social Work, and Doctor of Philosophy. Students interested in any of these advanced degrees should consult the [Graduate School Catalog](#) or the Dean of the Graduate School.

### Accreditations

- The Bachelor of Science (B.S.) degree program in chemistry is accredited by the American Chemical Society.
- The American Council on Education in Journalism and Mass Communications has accredited the Bachelor of Arts (B.A.) degree program in journalism.
- The degree programs in the Department of Music are accredited by the National Association of Schools of Music. The Doctor of Philosophy (Ph.D.) degree program in psychology is accredited by the American Psychological Association. The Bachelor of Arts (B.A.) degree program in social work and the Master of Social Work (MSW) degree are accredited by the Council of Social Work Education.

### Departments, Majors and Minors

**AFRICAN-AMERICAN STUDIES (AAST)**

- **Charles Robinson**  
  - Chair of Studies  
  - 416 Old Main  
  - 479-575-3001  
- **Professor Morgan** (sociology)  
- **Associate Professors Jones** (music), **Robinson** (history)  
- **Assistant Professors D’Alisera** (anthropology).

Students who wish to gain knowledge and understanding of the history, social organization, current status, and problems of African-Americans and of their contributions to the American heritage may elect a combined major in African-American studies together with a major in anthropology, economics, history, philosophy, political science, psychology, sociology, or social welfare.

**Requirements for a Combined Major in African-American Studies:**

1. Eighteen hours in African-American Studies courses in addition to the requirements for the departmental major;

Colloquia in Social Sciences  
- Must be selected from two different areas of social sciences. Course offerings vary each semester. See adviser.
- **Natural Science:**  
  - Eight hours of honors to be chosen from lab sciences. See adviser for specific science course listing.
- **Mathematics:**  
  - Fulbright Scholars must fulfill the math requirement of MATH 2043 or MATH 2053 or MATH 2554.
Studies major program requires 27 semester hours, which must
be tightly focused or highly individualized courses of study.
and provides substantial flexibility for students wishing to design
studies major promotes interdisciplinary approaches to these fields
human experience on the North American continent. The American
every department offers courses centered on various aspects of
established commitment to the study of American cultures. Virtually
Web site: http://www.uark.edu/misc/carsinfo/major.htm
E-mail: rcochran@uark.edu
479-575-7708
506 Old Main
Chair of Studies
Robert B. Cochran
American Studies (AMST)
Robert B. Cochran
Chair of Studies
506 Old Main
479-575-7708
E-mail: rc cochran@uark.edu
Web site: http://www.uark.edu/misc/carsinfo/major.htm

The J. William Fulbright College of Arts and Sciences has a long-
established commitment to the study of American cultures. Virtually
every department offers courses centered on various aspects of
human experience on the North American continent. The American
Studies major promotes interdisciplinary approaches to these fields
and provides substantial flexibility for students wishing to design
tightly focused or highly individualized courses of study.

Requirements for a Major in American Studies: The American
Studies major program requires 27 semester hours, which must
include the following:
2. Three hours of American history, HIST 2003 or HIST 2013.
   (Students must also complete PLSC 2003 to satisfy the
   University requirement.)
3. Three hours of American literature, (Papers submitted in this
course will fulfill the Fulbright College writing requirement.)
4. Eighteen hours to be selected from the following courses, with
   the selection to include:
   a. At least one of the following:
      ARCH 4483, ARHS 4913, ARHS 4923, COMM 4143,
      COMM 4353, COMM 4383, COMM 4883, MUHS 4253
   b. At least one of the following:
      ANTH 3213, ANTH 3253, GEOG 3343, GEOG 4063,
      SOCI 3033, SOCI 3193, SOCI 3253
   c. At least one of the following:
      PLSC 3153, PLSC 3853, PLSC 3973, PLSC 4203
   d. Nine hours in the chosen area of concentration. Sample
      areas of concentration include the following:
      African-American Culture – selections from:
      HIST 3233, PLSC 4243, PLSC 4263, SOCI 3033, SOCI
      4123, and other approved courses.
      Contemporary Politics – selections from:
      COMM 4383, HIST 4733, PLSC 3973, SOCI 3153,
      and other approved courses.
      Gender Issues – selections from:
      ENGL 3923H, and other approved courses.
      Native American Culture – selections from:
      ANTH 3203, ANTH 3213, ANTH 3263,
      HIST 3263, and other approved courses.
      Southern Culture – selections from:
      ENGL 3923H, HIST 4563, HIST 4573,
      and other approved courses
Western or Frontier Studies – selections from:
      HIST 4383, HIST 4463, PLSC 3223,
      and other approved courses

Requirements for the Major in American Studies with
Emphasis on Regional Studies: Students wishing to major in
American Studies with emphasis on regional studies may complete
requirements (1), (2), (3), and (4) as all majors. They must also com-
plete ANTH or SOCI 3253 to satisfy requirement (4A) and PLSC 3223
to satisfy requirement (4C). Either HIST 4563, or HIST 4573 must also
be completed in satisfying requirement (4D). These requirements total
nine hours, leaving six elective hours to complete requirement (4D).

American Studies Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan should
see page 42 in the Academic Regulations chapter for university
requirements of the program. The following eight-semester plan
refers to additional BA Core Requirement Areas (core areas a, b,
c, d, e, f, and g) found on page 194 at the end of this chapter. Core
requirement hours may vary by individual, based on placement and
previous credit granted. Once all core requirements are met, students
may substitute a three-hour (or more) general elective in place of a
core course.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 HIST 2003 History of the Am People to 1877 or HIST 2013
   History of the Am People 1877-present
3 AMST 2003 Intro to Am Studies or Core from areas a, b, c, d, e, f, and g
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183, 2554 or Core from areas a, b, c, d
   or e (as needed)
3 PLSC 2003 American National Government (meets core in area b)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16-17 semester hours
Fall Semester 2
3 AMST 2003 Intro to Am Studies (if needed) or Core from areas a, b, c, d or e (as needed)
3 †‡Course from Group 1, 2, 3 or 4 below (as needed)
3 †American Literature course or Core from area a, b, c, d or e (as needed)
3 Core from area a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 2
3 †‡Course from Group 1, 2, 3 or 4 below (as needed)
3 †‡Course from Group 1, 2, 3 or 4 below (as needed)
3 Core from area a, b, c, d or e (as needed)
3 Core from area a, b, c, d or e (as needed)
15 semester hours

Fall Semester 3
3 †‡Course from Group 1, 2, 3 or 4 below (as needed)
3 †‡Course from Group 1, 2, 3 or 4 below (as needed)
3 †American Literature course (if needed) or Core from area a, b, c, d or e (as needed)
3 †Core from area g (if needed) or †advanced level elective
1 General elective
16 semester hours

Spring Semester 3
3 †‡Course from Group 1, 2, 3 or 4 below (as needed)
3 †‡Upper level Fulbright College elective
3 †American Literature course (if needed) or general elective
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 †‡Upper level Fulbright College elective
3 Core from area a, b, c, d or e (as needed)
3 Core from area a, b, c, d or e (as needed)
3 †Advanced level elective
15 semester hours

Spring Semester 4
3 †‡Upper level Fulbright College elective
3 Core from area a, b, c, d or e (as needed)
3 Core from area a, b, c, d or e (as needed)
3 †Advanced level elective
3 General elective
15 semester hours

124 Total Hours

The following groups are referenced in the eight-semester plan above.

Group 1
ARCH 4483 Architecture of the Americas
ARHS 4913 American Art to 1900 (ARHS 2923)
ARHS 4923 American Art since 1900 (ARHS 2923)
COMM 4143 American Film Survey
COMM 4353 American Public Address (Jr. Standing)
COMM 4383 Rhetoric of the Modern American President
COMM 4883 Television and American Culture (COMM 2333)
MUHS 4253 Special Topics in Music History (MUHS 3703 & 3713)

Group 2
ANTH 3213 Indians of North America
ANTH 3253 Cultures of the South
GEOG 3343 Natural Regions of North America
GEOG 4063 Urban Geography (Jr. Standing)
SOCI 3033 American Minorities (SOCI 2013)
SOCI 3193 Race, Class, and Gender in America (SOCI 2013)
SOCI 3253 Cultures of the South

Group 3
PLSC 3153 Public Policy (PLSC 2003)
PLSC 3853 American Foreign Policy (PLSC 2003 or 2013)
PLSC 3933 Contemp American Political Thought
PLSC 4203 American Political Parties (PLSC 2003)

Group 4
At least 9 hours must be chosen from one of the following concentrations (or another approved by the director):

African American Studies
HIST 3233 African American History to 1877
PLSC 4243 Minority Politics
PLSC 4263 Supreme Court & Civil Rights
SOCI 3033 American Minorities
SOCI 4123 The Black Ghetto

Contemporary Politics
COMM 4383 Rhetoric of the American Presidency
HIST 4733 Recent America, 1941 to present
PLSC 3973 Twentieth Century Political Thought
SOCI 3153 Urban Sociology

Gender Issues
ENGL 3923H Honors Colloquium (Honors)

Native American Culture
ANTH 3203 American Indians Today
ANTH 3213 Indians of North America
ANTH 3263 Indians of Arkansas and the South
HIST 3263 History of the American Indian

Southern Culture
ENGL 3923H Honors Colloquium
HIST 4563 The Old South, 1607-1865
HIST 4573 The New South, 1865-present

Western or Frontier Studies
HIST 3383 Arkansas and the Southwest
HIST 4463 The American Frontier
PLSC 3223 Arkansas Politics

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for the Certificate in American Studies for International Students Not Seeking a University of Arkansas Degree: International students not seeking a University of Arkansas degree may receive a certificate in American Studies by completing requirements (2) and (3), plus completing a total of twelve hours in any combination from the courses listed under requirement (4). This represents a total of 18 hours.

Requirements for Departmental Honors in American Studies: The Departmental Honors Program in American Studies offers junior and senior students the opportunity to enroll in enriched courses and to conduct independent research. In addition to satisfying all other requirements for the major, honors candidates must complete at least 12 hours of honors work, including six in honors essay. The Honors Program in American Studies requires a total of 33 hours in addition to University and college requirements.
ANTHROPOLOGY (ANTH)

Jerome Rose
Chair of the Department
330 Old Main
479-575-2508
Web site: http://www.uark.edu/depts/anthinfo/

- University Professor Limp
- Professors Early, Green, Kay, Kvamme, Mainfort, Rose, Sabo, Schneider (M.J.), Swedenburg, Ungar
- Professors Emeriti Davis, Hoffman (Michael), McGimsey
- Associate Professors D’Alisera, Plavcan, Striffler
- Associate Professor Emeritus Schneider (W.)
- Assistant Professors Casana, Erickson
- Assistant Professor Emeritus Hoffman (Margaret)

Courses in anthropology provide an introduction to world peoples, their ways of living, and world views. Anthropology helps students to better understand human similarities and differences.

**Requirements for a Major in Anthropology:** 30 semester hours including ANTH 1013, ANTH 1011L, ANTH 1023, ANTH 3023/3021L, and ANTH 4013.

**Writing Requirement:** The Fulbright College research/analytical paper requirement for anthropology majors is fulfilled in ANTH 4013.

**Requirements for Departmental Honors in Anthropology:** The Departmental Honors Program in Anthropology provides an opportunity for outstanding undergraduate majors to conduct independent research under the supervision of a faculty member. The research project culminates in an honors thesis, which is primary for the award “Anthropology Scholar Cum Laude.” Higher degree distinctions are recommended only in truly exceptional cases and are based upon the candidate’s entire program of honors studies.

Honors candidates must meet the college requirements for an honors degree. They must complete and defend an honors thesis and take 12 hours, which may include 6 hours of thesis, in Honors Studies. The candidate is expected to maintain a minimum 3.25 cumulative grade-point average in anthropology and other course work, to participate in anthropology honors colloquia, and is encouraged to take honors courses outside the anthropology department.

**Anthropology Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 ANTH 1023 Introduction to Cultural Anthropology
3 Core from areas a, b, c, d or e
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

**Spring Semester 1**

3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183, 2554 or Core from areas a, b, c, d or e (as needed)
16 semester hours

**Fall Semester 2**

4 †ANTH 3023/3012L Approaches to Archeology and Lab
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
16 semester hours

**Spring Semester 2**

3 †Core from area g (if needed) or †Advanced Level Elective
3 †ANTH Upper Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
15 semester hours

**Fall Semester 3**

3 †ANTH Upper Level Elective
3 †ANTH Upper Level Elective
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 General Elective
16 semester hours

**Spring Semester 3**

3 †ANTH Upper Level Elective
3 †Core from area g (if still needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

**Fall Semester 4**

3 †ANTH Upper Level Elective
3 †ANTH Upper Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced Level Elective
15 semester hours

**Spring Semester 4**

3 †ANTH Upper Level Elective
3 †Advanced Level Elective
3 †Advanced Level Elective
3 General Elective
3 General Elective
15 semester hours

**124 Total Hours**

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.
Requirements for a Minor in Anthropology: 15 hours including ANTH 1023. At least 9 hours must be in courses numbered 3000 or above. Students who minor in anthropology should consult with an anthropology adviser to select appropriate courses. A student must notify the department of his or her intent to minor.

Requirements for a Combined Major in Anthropology and Sociology: 36 hours with a minimum of 15 hours in each subject, to include SOCI 2013, SOCI 3013, SOCI 3303 (or a course in statistics), SOCI 3313, and SOCI 4023 and ANTH 1013, ANTH 1011L, ANTH 1023, ANTH 3023/3021L, and ANTH 4013. Additional courses are to be selected in consultation with a representative of the field concerned.

Anthropology/Sociology Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 ANTH 1023 Introduction to Cultural Anthropology
3 Core from areas a, b, c, d (as needed)
3 Core from areas a, b, c or d (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
4 ANTH 1013/1011L Introduction to Biological Anthropology and Lab
3 SOCI 2013 General Sociology
3 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, or d (as needed)
3 Core from areas a, b, c or d (as needed)
16 semester hours

Fall Semester 2
4 ‡‡ANTH 3023/3021L Approaches to Archaeology and Lab
3 Core from areas a, b, c or d (as needed)
3 Core from areas a, b, c or d (as needed)
3 Core from areas a, b, c or d (as needed)
3 General elective
16 semester hours

Spring Semester 2
3 ‡‡SOCI 3013 Population and Society
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c or d (as needed)
3 Core from areas a, b, c or d (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 3
4 ‡‡SOCI 3133/3301L Social Data & Analysis and Lab
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c or d (as needed)
3 Core from areas a, b, c or d (as needed)
3 General Elective
16 semester hours

Spring Semester 3
3 ‡‡SOCI 3303 Social Research
3 ‡‡SOCI or ANTH 3000-4000 Level Elective
3 Core from areas a, b, c or d (as needed)
3 Core from areas a, b, c or d (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡‡ANTH 4013 History of Anthropological Thought
3 ‡‡SOCI 4023 Social Theory
3 Core from areas a, b, c or d (as needed)
3 General Elective
3 General Elective
15 semester hours

Spring Semester 4
3 ‡‡ANTH 3000-4000 Level Elective
3 ‡‡Advanced Level Elective
3 ‡‡Advanced Level Elective
3 General Elective
3 General Elective
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Cartography/Remote Sensing/GIS Specialization: This program gives students an opportunity to develop expertise in (1) cartography, map design and computer-assisted map production, (2) remote sensing and image interpretation, including photographic systems, sensor systems, and digital image processing, and (3) geographic information systems, including data sources, analytical techniques, and hardware/software systems.

To complete the specialization, a student is required to fulfill certain course requirements.

Required Courses (9 hours):
GEOG 3023, GEOL 4413, and GEOG 4543 (same as ANTH 4543)
4 Elective Courses (9 hours to be selected from the following):
GEOG 4523, GEOL 5423, GEOG 4553 (same as ANTH 4553), GEOG 4563 (same as ANTH 4563), GEOG 4573 (same as ANTH 4573), GEOG 4593 (same as ANTH 4593), STAT 4003 (or other approved statistics course), CVEG 2053 (or other approved surveying course), CENG 4883.

For the combined major in Anthropology and African-American Studies, see the African-American Studies listing.

For requirements for the M.A. and Ph.D. degrees in anthropology, see the Graduate School Catalog.

SEE PAGE 315 FOR ANTHROPOLOGY (ANTH) COURSES

ART (ARTS)
Lynn F. Jacobs
Chair of the Department
116 Fine Arts Building
479-575-5202
Web site: http://www.art.uark.edu
E-mail: artinfo@www.uark.edu
Bachelor of Arts Degree

Transfer students should confer with the chairperson of the department prior to entrance for information concerning entrance requirements and transfer credits.

**Requirements for an Art Major:** A minimum of 40 semester hours, including ARTS 1313, ARTS 1323, ARTS 1013, ARTS 2013, ARTS 4921, and at least 12 hours in art history/criticism to include: ARHS 2913 (Survey I) and 2923 (Survey II), one course from ARHS 4833 (Ancient), ARHS 4843 (Medieval), ARHS 4853 (Italian Renaissance), ARHS 4863 (Northern Renaissance), ARHS 4873 (Baroque), one course from ARHS 4883 (19th Century European), ARHS 4893 (20th Century European), ARHS 4913 (American Art to 1900), ARHS 4923 (American Art Since 1900), ARHS 4813 (History of Photography), ARHS 4823 (History of Graphic Design). In addition to the freshman year block of courses, the art major must complete a minimum of three semesters in one specialty area of art and a minimum of two semesters in a second area. Areas of selection are drawing, painting, sculpture, printmaking, ceramics, photography, and visual design. An exhibition of creative work of each student is required before commencement. No art major may present ARTS 1003 or ARHS 1003, or any other art course, to satisfy the college fine arts requirement.

**Art B.A. Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Primary concentration requires 9 hours in one area chosen from ceramics, drawing, painting, sculpture, printmaking, or sculpture. Secondary concentration requires 6 hours in another area. Must be 3000-4000 level for credit toward the 24-hour rule.

### Fall Semester 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ENGL 1013 Composition I</td>
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<tr>
<td>MATH 1203 (if required) or †MATH 2043, 2053, 2183 or 2554</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARTS 1013 Drawing Fundamentals 1 or ARTS 1313 Two-Dimensional Design</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
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<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
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### Spring Semester 1

<table>
<thead>
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<th>Hours</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ENGL 1023 Composition II</td>
<td>3</td>
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<tr>
<td>†MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
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<tr>
<td>ARTS 1013 Drawing Fundamentals 1 or ARTS 1313 Two-Dimensional Design (as needed)</td>
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### Fall Semester 2

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<tr>
<td>†ARTS 2013 Figure Drawing 1 or ARTS 1323 Three-Dimensional Design</td>
<td>3</td>
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<tr>
<td>ARHS 2913 Art History Survey 1</td>
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<td>Core from areas a, b, c, d or e (as needed)</td>
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### Spring Semester 2

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<thead>
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<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>†Core from area g (if needed) or †Advanced Level Elective</td>
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<td></td>
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<tr>
<td>†ARTS 2013 Figure Drawing 1 or ARTS 1323 Three-D Design (as needed)</td>
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<tr>
<td>ARHS 2923 Art History Survey 2</td>
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<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
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<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
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### Fall Semester 3

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<td>††ARTS primary or secondary concentration</td>
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<tr>
<td>††Upper Level ARHS Group 1 or 2</td>
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<td>Core from areas a, b, c, d or e (as needed)</td>
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<td>16 semester hours</td>
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### Spring Semester 3

<table>
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<tr>
<th>Course</th>
<th>Hours</th>
<th>Notes</th>
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<tbody>
<tr>
<td>††ARTS primary or secondary concentration</td>
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<td></td>
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<tr>
<td>††Upper Level ARHS Group 1 or 2 (as needed)</td>
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<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
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<td></td>
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<tr>
<td>Core from area f (as needed)</td>
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</tr>
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<td>124 Total Hours</td>
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Upper Level ARHS Group 1. Choose one course from:

- ARHS 4833 Ancient Art
- ARHS 4843 Medieval Art
- ARHS 4853 Italian Renaissance Art
- ARHS 4863 Northern Renaissance Art
- ARHS 4873 Baroque Art

Upper Level ARHS Group 2. Choose one course from:

- ARHS 4813 History of Photography

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**J. William Fulbright College of Arts and Sciences**
ARHS 4823 History of Graphic Design
ARHS 4883 19th Century European Art
ARHS 4893 20th Century European Art
ARHS 4913 American Art to 1900
ARHS 4923 American Art since 1900
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for an Art Minor: A minimum of 18 semester hours to include ARTS 1013, either ARTS 1313 or ARTS 1323, and one of the following three courses: ARHS 1003, ARHS 2913, or ARHS 2923. A minimum of nine additional hours are required in studio art, to be determined through consultation with an art department adviser. A student must notify the department of his or her intent to minor.

Requirements for a Major in Art with a Concentration in Art History/Criticism: A minimum of 39 semester hours, including ARTS 1313, ARTS 1323, ARTS 1013, ARTS 2013, and ARHS 2913, ARHS 2923. In addition to the preceding requirements, two courses selected from ARHS 4833, ARHS 4843, ARHS 4853, ARHS 4863, ARHS 4873, two courses selected from ARHS 4813, ARHS 4823, ARHS 4883, ARHS 4893, ARHS 4913, ARHS 4923. In addition, ARHS 4963 (Individual Research in Art History), one seminar course in art history or art criticism, and one elective course in art history or studio art. No art major may present ARHS 1003 or ARTS 1003, or any other art course, to satisfy the college fine arts requirement.

Art B.A. with Art History/Criticism Concentration Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (if required) or †MATH 2043, 2053, 2183 or 2554
3 ARHS 2913 Art History Survey I
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed)
3 ARHS 2923 Art History Survey 2
3 ARTS 1013 Drawing Fundamentals 1 or ARTS 1313 Two-Dimensional Design
4 Core from area f (as needed)
16 semester hours

Fall Semester 2
3 ARTS 1313 Two-Dimensional Design or ARTS 1013 Drawing Fund. I (as needed)
3 ††Upper Level ARHS Group 1 or 2
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 2
3 ARTS 1323 Three-Dimensional Design or †ARTS 2013 Figure Drawing
3 ††Upper Level ARHS Group 1 or 2
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Fall Semester 3
3 ††Upper Level ARHS Group 1 or 2 (as needed)
3 †ARTS 2013 Figure Drawing 1 or ARTS 1323 Three-Dimensional Design (as needed)
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 3
3 ††ARHS 4943 Seminar in Art Criticism
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ††ARHS 4963 Individual Research in Art History
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
1 General Elective
16 semester hours

Spring Semester 4
3 ††ARHS 4963 Individual Research in Art History
3 ††Upper Level ARHS Elective
3 †Advanced Level Elective
3 †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

124 Total Hours

Upper Level ARHS Group 1. Choose two courses from:
ARHS 4833 Ancient Art (ARHS 2913)
ARHS 4843 Medieval Art (ARHS 2913)
ARHS 4853 Italian Renaissance Art (ARHS 2923)
ARHS 4863 Northern Renaissance Art (ARHS 2923)
ARHS 4873 Baroque Art (ARHS 2923)

Upper Level ARHS Group 2. Choose two courses from:
ARHS 4813 History of Photography
ARHS 4823 History of Graphic Design
ARHS 4883 19th Century European Art (ARHS 2923)
ARHS 4893 20th Century European Art (ARHS 2923)
ARHS 4913 American Art to 1900 (ARHS 2923)
ARHS 4923 American Art since 1900 (ARHS 2923)
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
Requirements for a Minor in Art History/Criticism: A minimum of 18 semester hours to include ARTS 1013, ARHS 2913, ARHS 2923, and three additional art history courses exclusive of seminars. A student must notify the department of his/her intent to minor. The minor is especially suited to students majoring in anthropology, English, foreign languages, history, philosophy, and music.

Requirements for Departmental Honors in Art: As part of the Honors Studies Program of the J. William Fulbright College of Arts and Sciences, the department of art provides the opportunity for academically superior junior- and senior-level students to acquire broader and deeper knowledge and skills in the visual arts and related disciplines. This is accomplished through independent research projects in studio art and/or art history under the direction of the art faculty. Outstanding achievement is recognized by awarding the distinction “Art Scholar Cum Laude.” Students may apply for honors studies beginning in the second semester of their sophomore year and normally will not be accepted into the program after completion of the second semester of their junior year. The department requires each applicant to have a minimum cumulative grade-point average of 3.25 in all college work, a minimum grade-point average of 3.25 in all course work taken in the department of art, completed ARHS 2913 and ARHS 2923, completed at least 20 semester hours of work in art department courses, and at least 30 semester hours of general education requirements. Included in those hours, a student must complete and defend an honors thesis and take 12 hours, which may include 6 hours of thesis, in honors studies. Higher degree distinctions take into consideration the student’s entire academic career and are recommended for only those students whose honors projects and programs of study demonstrate a truly exceptional degree of creativity and scholarship.

Bachelor of Fine Arts Degree

Admission: Students earning a grade-point average of 3.00 or higher in art, after the completion of ARTS 1013, 1313, and 1323, and who have maintained an overall grade-point average of 2.00 are eligible to make application to the B.F.A. degree program. In addition to meeting the required grade-point average, all students must submit, as part of their application, a portfolio of current representative work for evaluation by the art faculty. Acceptance into the B.F.A. program is contingent upon favorable evaluation by the art faculty of the applicant’s portfolio. Upon acceptance into the B.F.A. degree program, each student will be assigned a major adviser for the purpose of completing a degree plan, which must meet departmental approval.

After entry into the B.F.A. program, the student is required to complete two semesters with a minimum of three credit hours of course work in their major studio area each semester. Transfer credit will be allowed from other accredited and recognized art departments if the credit earned is compatible with program and course requirements within the UA art department and reflects a grade of "C" or higher. This department will not accept more than 50 percent of the required B.F.A. professional degree credits from another institution.

Degree Requirements: The Bachelor of Fine Arts degree will be awarded to students, who, upon the completion of the approved program, have maintained a 3.00 grade-point average within the UA art department and a 2.00 grade-point average overall. A faculty-supervised critique of the work of each student, once each semester in the program, is required. A senior review and exhibition will be required prior to the granting of the degree.

Bachelor of Fine Arts Degree

Admission: Students earning a grade-point average of 3.00 or higher in art, after the completion of ARTS 1013, 1313, and 1323, and who have maintained an overall grade-point average of 2.00 are eligible to make application to the B.F.A. degree program. In addition to meeting the required grade-point average, all students must submit, as part of their application, a portfolio of current representative work for evaluation by the art faculty. Acceptance into the B.F.A. program is contingent upon favorable evaluation by the art faculty of the applicant’s portfolio. Upon acceptance into the B.F.A. degree program, each student will be assigned a major adviser for the purpose of completing a degree plan, which must meet departmental approval.

After entry into the B.F.A. program, the student is required to complete two semesters with a minimum of three credit hours of course work in their major studio area each semester. Transfer credit will be allowed from other accredited and recognized art departments if the credit earned is compatible with program and course requirements within the UA art department and reflects a grade of "C" or higher. This department will not accept more than 50 percent of the required B.F.A. professional degree credits from another institution.

Degree Requirements: The Bachelor of Fine Arts degree will be awarded to students, who, upon the completion of the approved program, have maintained a 3.00 grade-point average within the UA art department and a 2.00 grade-point average overall. A faculty-supervised critique of the work of each student, once each semester in the program, is required. A senior review and exhibition will be required prior to the granting of the degree.

Off-campus Study Requirement: Each student is required to complete an approved off-campus study experience each semester in the program. This may involve a field trip to an urban center that includes visits to major art collections.

Requirements for the Bachelor of Fine Arts Degree with an Emphasis in Studio Art: A minimum of 84 semester hours including ARTS 1013, ARTS 1313, ARTS 1323, ARTS 2003, ARTS 2013, ARTS 3333, ARTS 3023 or ARTS 4343, and ARTS 4921, PHIL 4403, plus a minimum of 18 semester hours in the selected studio major, a minimum of 26 semester hours in art electives (must include a minimum of one course in each of the following areas: painting, sculpture, printmaking, visual design, photography, and ceramics. Up to six credit hours may be taken outside of the department with approval), and at least 15 semester hours in art history including ARHS 2913, ARHS 2923, and ARHS 4943.

Art B.F.A. Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.F.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 195 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

ARTS Electives must include at least one course in each of the following media areas: painting, sculpture, printmaking, visual design, photography and ceramics.

Fall Semester 1
1. 3 ENGL 1013 Composition I
2. 3 MATH 1203 College Algebra
3. 3 ARTS 1013 Drawing Fundamentals I
4. 3 ARTS 1313 2-Dimensional Design or ARTS 1323 3-Dimensional Design
5. 3 Core from areas a, b, c, d or e (as needed)
6. 15 semester hours

Spring Semester 1
1. 3 ENGL 1023 Composition II
2. 3 Core from areas a, b, c, d or e (as needed)
3. 3 Core from areas a, b, c, d, or e (needed only if starting at 1003 level in foreign language)
4. 3 †ARTS 2013 Figure Drawing or †‡Arts Primary Studio Concentration 1
5. 3 ARTS 1313 2-Dimensional Design or ARTS 1323 Three-Dimensional Design (as needed)
6. 3 ARTS Elective
7. 15-18 semester hours

Fall Semester 2
1. 3 ARTS Elective
2. 3 †ARTS 2013 Figure Drawing (if needed) or †‡Arts Primary Studio Concentration 1
3. 3 Core from areas a, b, c, d or e (as needed)
4. 3 Core from areas a, b, c, d, or e (as needed)
5. 3 †Core from area g (if required; may also take in semester 6) or ARTS Elective
6. 3 ARHS 2913 Art History Survey I
7. 18 semester hours

Students must apply for a BFA degree program and be accepted into BFA program to continue.
Spring Semester 2
3 †Advanced Foundations Course*  
3 ARTS Elective  
3 ††ARTS Primary Studio Concentration 2  
4 Core from area f  
3 ARHS 2923 Art History Survey II  
16 semester hours

Fall Semester 3
3 ††Advanced Foundations Course*  
3 ††ARTS Primary Studio Concentration 3  
3 ARTS Elective  
3 †ARHS Art History upper level  
3 Core from area a, b, c, d or e (as needed)  
3 Core from areas a, b, c, d or e (as needed)  
18 semester hours

Spring Semester 3
3 ††ARTS Primary Studio Concentration 4  
3 ARTS Elective  
3 ††Advanced Foundations Course* or ARTS Upper-Level Elective  
3 Core from areas a, b, c, d or e (as needed)  
3 ††ARHS Art History upper level  
3 †Core from area g (if needed) or ARTS Elective  
18 semester hours

Fall Semester 4
3 ††ARTS Primary Concentration 5  
3 ARTS Elective or Advanced Foundations Course* (if needed)  
3 †ARHS 4943 Seminar in Art Criticism  
3 Core from areas a, b, c, d or e (as needed)  
4 Core from area f  
16 semester hours

Spring Semester 4
3 ARTS Elective (may be in primary area)  
3 ††ARTS 4921 Professional Practices  
1 ††ETEC 4403 Philosophy of Art  
3 ARTS Elective (if needed)  
3 Core from areas a, b, c, d or e (as needed)  
16 semester hours

128 Total Hours

*Advanced Foundation Courses:  
ARTS 2003 Drawing Fundamentals II (Fall and Spring)  
ARTS 3333 Color Studies (Fall)  
ARTS 3023 Drawing III (Fall) or ARTS 4343 Advanced Design (Spring)

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter  
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for the Bachelor of Fine Arts Degree with Emphasis in Art Education: A minimum of 66 hours to include ARTS 1013, ARTS 1313, ARTS 1323, ARTS 2003, ARTS 2013, ARTS 3333, ARTS 3023 or ARTS 4343, ARTS 4921, PHIL 4403, a minimum of 12 hours in a selected studio major and 6 hours in a selected studio minor, at least 12 hours in art history including ARHS 2913, ARHS 2923, and ARHS 4943, at least 8 hours studio art electives exclusive of the studio major and minor to be selected from ARTS 3103, ARTS 3203, ARTS 3363, ARTS 3463, ARTS 3503 or ARTS 3523, ARTS 3803.

Students who wish to apply for admission to the internship program in art education must complete the following Stages.

Stage I: Complete an evaluation for internship. Students must also meet the following criteria to be cleared for the internship:
1. Declare the major in art education in the Fulbright Advising Center, 518 Old Main.
2. Successful completion of the PRAXIS I test by meeting or exceeding the Arkansas Department of Education cut-off scores. This test should be taken after the student has completed 30 credit hours and upon completion of ENGL 1013, ENGL 1023, and MATH 1203.
3. Obtain a “C” or better in the following pre-education core courses: CIED 1002, CIED 1011, CIED 3023, CIED 3033, ETEC 2001, ETEC 2002L.
4. Obtain a “C” or better in ARED 3613, ARED 3643, ARED 3653.
5. Satisfactory completion of the Evaluation for Internship form. The Evaluation form must be completed by October 1 prior to doing a fall internship or March 1 prior to doing a spring internship. This form is available online at http://coehp.uark.edu/Evaluation_for_Art_Internship.doc. The completed form must be returned to the Coordinator of Teacher Education, 8 Peabody Hall, no later than the stated deadline.
6. Complete the B.F.A. degree with a cumulative GPA of 2.50 or higher. The degree must be posted to your University of Arkansas transcript at the Registrar’s Office prior to internship.
7. Obtain departmental clearance for internship based on successful completion of portfolios, evaluation for internship, GPA requirements, course work requirements, selected written recommendations, an interview, and/or other requirements specified by your program.
8. Complete licensure packet available from the Coordinator of Teacher Education, Peabody Hall Room 8. All requirements in Stage I must be met to be cleared for the internship. Please contact the Coordinator of Teacher Education, 8 Peabody Hall, College of Education and Health Professions for more information.

Stage II: Internship
1. Complete the one-semester internship at an approved site in Washington or Benton counties.
2. Complete Praxis II requirements. See your adviser for completion dates.

NOTE: Students should always consult the Coordinator of Teacher Education for any licensure requirement changes. Students will not be licensed to teach in Arkansas until they have met all requirements for licensure as set forth by the Arkansas Department of Education.

The Evaluation form must be completed by October 1 prior to doing a fall internship or March 1 prior to doing a spring internship. This form is available online at http://coehp.uark.edu/Evaluation_for_Art_Internship.doc. The completed form must be returned to the Coordinator of Teacher Education, 8 Peabody Hall, no later than the stated deadline.

Writing Requirement: The Fulbright College research/analytical writing requirement for art majors, B.A. and B.F.A. degrees, will be fulfilled in art history courses ARHS 4833, ARHS 4843, ARHS 4853, ARHS 4863, ARHS 4873, ARHS 4943, ARHS 4963, and ARHS 4973. It also may be an honors thesis in art history (only).
**Art B.F.A. with Emphasis in Art Education Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.F.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 195 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

ARTS Electives exclusive of the studio major and minor to be selected from ARTS 3103, ARTS 3203, ARTS 3363, ARTS 3463, ARTS 3503 or ARTS 3523, ARTS 3803.

### Fall Semester 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1013 Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1203 College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1013 Drawing Fundamentals 1</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1313 2-Dimensional Design or ARTS 1323 3-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>Core from areas a, b, c, or d (needed only if starting at 1003 level in foreign language)</td>
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### Spring Semester 1

<table>
<thead>
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<tbody>
<tr>
<td>ENGL 1023 Composition II</td>
<td>3</td>
</tr>
<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>4</td>
</tr>
<tr>
<td>Core from area f (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1313 2-Dimensional Design or ARTS 1323 3-Dimensional Design (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2013 Figure Drawing or ARTS Primary Studio Concentration</td>
<td>16</td>
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### Fall Semester 2

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
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<tbody>
<tr>
<td>ARTS 2013 Figure Drawing (if needed) or ARTS Primary Studio Concentration</td>
<td>3</td>
</tr>
<tr>
<td>ARTS Secondary Studio Concentration</td>
<td>3</td>
</tr>
<tr>
<td>ARHS 2913 Art History Survey I</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2003 General Psychology</td>
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<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>18</td>
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### Spring Semester 2

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ARTS Advanced Foundations Course*</td>
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<td>ARTS Primary Studio Concentration</td>
<td>3</td>
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<tr>
<td>Core from area f (as needed)</td>
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<td>CIED 1002/101 Introduction to Education</td>
<td>3</td>
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<td>ARHS 2923 Art History Survey II</td>
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Students must apply and be accepted to the B.F.A. Program to continue.

### Fall Semester 3

<table>
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<tbody>
<tr>
<td>ARTS Advanced Foundations Course*</td>
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<tr>
<td>ARTS Primary Studio Concentration</td>
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</tr>
<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>Core from area g (if required) or Core from areas a, b, c, or d (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>18 semester hours</td>
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### Spring Semester 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS Primary Studio Concentration</td>
<td>3</td>
</tr>
<tr>
<td>ARTS Advanced Foundations Course or ARTS elective (exclusive of studio major and minor)</td>
<td>3</td>
</tr>
<tr>
<td>ARED 3613 Public School Art</td>
<td>3</td>
</tr>
<tr>
<td>Core from areas a, b, c, or d (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>ARHS 4943 Art Criticism</td>
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<tr>
<td>CIED 3033 Classroom Learning Theory</td>
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### Fall Semester 4

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS elective (exclusive of studio major and minor) or Advanced Foundations Course* (if needed)</td>
<td>3</td>
</tr>
<tr>
<td>ARTS elective (exclusive of studio major and minor) or ARTS Secondary Studio Concentration</td>
<td>3</td>
</tr>
<tr>
<td>ARED 3653 Teaching Art in Elementary schools</td>
<td>3</td>
</tr>
<tr>
<td>ARHS 4921 Professional Practices</td>
<td>3</td>
</tr>
<tr>
<td>CIED 3023 Survey of Exceptionalities</td>
<td>3</td>
</tr>
<tr>
<td>ARHS advanced elective</td>
<td>16</td>
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</tbody>
</table>

### 128 Total Hours

Note: In addition to and after completion of the program listed above, for certification, the student must complete an additional 12 hours of Student Teaching in Art, ARTS 476V and take the Praxis II exams ( concurrent with enrollment in ARTS 476V).

*Advanced Foundation Courses:
- ARTS 2003 Drawing Fundamentals II (Fall and Spring)
- ARTS 3333 Color Studies (Fall)
- ARTS 3023 Drawing III (Fall) or ARTS 4343 Advanced Design (Spring)

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter.

‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

For requirements for the M.F.A. degree program in art, see the Graduate School Catalog.

SEE PAGE 319 FOR ART (ARTS) COURSES

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**ARTS AND SCIENCES (ARSC)**

Charles H. Adams  
Chair of Studies  
525 Old Main  
479-575-4801

Students may enroll in off-campus programs (ARSC) under special circumstances and with the approval of the Associate Dean of Fulbright College.
ASIAN STUDIES (AIST)

Charles H. Adams
Chair of Studies
525 Old Main
479-575-4801

Students may earn a minor in Asian Studies by taking courses in art, anthropology, economics, geography, history, languages, sociology, political science, and literature of Asia.

Language Requirement: Students must fulfill the Fulbright College requirement in either Chinese or Japanese. At the discretion of the chair of studies, proficiency in other Asian languages may also satisfy this requirement.

Beyond the language requirement, students must complete 15 credit hours of approved courses, including at least three hours in the Asian Studies Colloquium (AIST 4003). The following courses may be taken in fulfillment of the elective requirements:
- ANTH 4613 Primate Adaptation and Evolution
- ECON 4633 International Trade Policy
- HIST 3503 Far East in Modern Times
- HIST 4313 History of China to 1644
- HIST 4323 Modern China
- HIST 4343 Modern Japan
- JAPN 4313 Language and Society of Japan
- PLSC 3503 Governments and Politics of East Asia
- PLSC 4823 Foreign Policy of East Asia
- SOCI 3013 Population and Society
- WLIT 4293 Literature of China and Japan

Students may also apply three hours of credit in an approved study-abroad program in an Asian country and three hours of upper-level Chinese or Japanese toward the minor.

Other courses, MGMT 4583, International Management, and Performing Arts of East Asia, may be taken for credit toward the minor. Other Asian Languages and Area Studies courses may also be taken for credit toward the minor with the approval of the chair of Asian Studies.

SEE PAGE 314 FOR ASIAN STUDIES (AIST) COURSES

BIOLOGICAL SCIENCES (BISC)

Kimberly G. Smith
Chair of the Department
601 Science and Engineering
479-575-3251
Web site: http://biology.uark.edu/

- University Professor James
- Professors Durdik, Etges, Henry, Smith (K.), Spiegel, Walker
- Professors Emeriti Dale, Evans, Johnston, Kilambi, Martin, Meyer, Russert-Kraemer, Smith (E.), Talburt
- Research Professors Krementz, Stephenson
- Associate Professors Beaupre, Brown, Ivey, Kral, Lehmann, Rhoads, Sagers, Ziegler
- Associate Professors Emeriti Bailey, Lane, Wickliff
- Associate Research Professor Magoulick
- Assistant Professors Curtin, Huxel, McNabb, Pinto, Silberman
- Assistant Research Professor Goforth, Radwell

The Department of Biological Sciences offers a Bachelor of Science degree for those students who seek a degree with a broad background in the life sciences. The B.S. is recommended for students planning to continue their education in basic or applied biology in graduate or professional school. A Bachelor of Arts degree is available for students who do not necessarily plan on a career as a professional biologist but who desire a good foundation in the discipline. Students seeking research experience are invited to participate in the college honors program.

Requirements for a B.S. Degree with a Major in Biology: A minimum of 124 hours is required, including 40 hours in the major as specified below.

1. Biology Core (13 hours): Cell Biology (BIOL 2533), General Genetics (BIOL 2323), Evolutionary Biology (BIOL 3023), General Ecology (BIOL 3863) and a minimum of one hour of Core Laboratory selected from Cell Biology Laboratory (BIOL 2531L), General Genetics Laboratory (BIOL 2321L), and General Ecology Laboratory (BIOL 3861L)

2. Biobibliographic Practicum (BIOL 2001)

3. An additional 26 hours of electives in biology and/or biology related electives including:
   a. No more than 8 hours of elective courses at the 1000 level.
      This includes Principles of Biology. Principles of Biology (BIOL 1543/1541L) is not required for the B.S. major. Well-prepared students, in consultation with their advisor, may opt to begin their coursework with the Core.
   b. At least 2 elective courses numbered 2000 or higher which are lab courses. This includes Core Labs taken in addition to the basic Core requirement.
   c. At least 18 hours in courses numbered 3000 or higher, of which at least 12 hours must be from courses numbered 4000 or higher.
   d. A course meeting the Fulbright College writing requirement.
   (The means of meeting the writing requirement are listed following the description of Requirements for Departmental Honors in Biology.)

NOTE: Biology related electives that are not taught by the Department of Biological Sciences must be approved using the “Exception Request—DARS for Major or Minor Requirements” form.

Requirements in cognate science and mathematics include the following:

1. CHEM 1103/1101L (may be completed by advanced placement), CHEM 1123/1121L, CHEM 3603/3601L, CHEM 3613/3611L, CHEM 3813

2. PHYS 2013/2011L, PHYS 2033/2031L or PHYS 2054/2050L, PHYS 2074/2070L

3. MATH 2554 (MATH 2564 is recommended)

4. STAT 2023 or STAT 4003/4001L or equivalent.

Biology B.S. Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-5 MATH 1213 or 1285 or MATH 2554
4 BIOL 1543/Biol 1541L Principles of Biology and Lab
3-4 CHEM 1103/Chem 1101L (optional) University Chemistry I
3 Core from areas a, b, c or e (as needed)
16-19 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
### Fall Semester 2

- 3-4 †MATH 2554 or Core from areas a, b, c or e (as needed)
- 4 CHEM 1123/CHEM 1121L University Chemistry II and Lab
- 3 Core from areas a, b, c or e (as needed)
- 1 General Elective
- 14-15 semester hours

### Spring Semester 2

- 3-4 †‡CHEM 3603/CHEM 3601L Organic Chemistry I and Lab
- 3 Core from areas a, b, c or e (as needed)
- 4 BIOL lab course 2000-level or above
- 1 General Elective
- 15-16 semester hours

### Fall Semester 3

- 3-4 †‡BIOL 3000-4000 Level Elective
- 3 †‡CHEM 3863/BIOL 3861L General Ecology
- 1 Core from area f (if needed) or Core from areas a, b, c or e (as needed)
- 3 Core from areas a, b, c or e (as needed)
- 16-17 semester hours

### Spring Semester 3

- 3-4 †‡BIOL 3000-4000 Level Elective
- 3 †‡CHEM 3863/BIOL 3861L General Ecology
- 1 BIOL 2001 Bibliographic Practicum
- 4 †‡PHYS 2033/PHYS 2031L College Physics II and Lab
- 3 Core from areas a, b, c or e (as needed)
- 14-16 semester hours

### Fall Semester 4

- 3-4 †‡BIOL 3000-4000 Level Elective
- 3-4 †‡CHEM 3863/BIOL 3861L General Ecology
- 3 †STATS 2023 Biostatistics
- 3 Core from areas a, b, c or e (as needed)
- 3 Core from areas a, b, c or e (as needed)
- 15-17 semester hours

### Spring Semester 4

- 3-4 †‡BIOL 4000 Level Elective
- 3-4 †‡BIOL 4000 Level Elective
- 3-4 †‡BIOL 3000-4000 Level Elective
- 3 Core from areas a, b, c or e (as needed)
- 15-17 semester hours

### 124 Total Hours

† Meets 40-hour advanced credit hour requirement. See 3 on Graduation Requirements Checklist or see the Catalog of Studies.
Spring Semester 2
3-4 † BIOL 2013/BIOL 2011L Gen. Micro or BIOL 2533 (BIOL 2531L optional) Cell Biology
4 † BIOL 2213/ BIOL 2211L Human Phys. or BIOL 2323/ BIOL 2321L Gen. Genetics
4 †‡ CHEM 3613/ CHEM 3611L Organic Chemistry II
3 † Core from area g (if needed) or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16-17 semester hours

Fall Semester 3
4 † BIOL 2213/ BIOL 2211L or BIOL 2323/ BIOL 2321L
3-4 † BIOL 2404/ BIOL 2400L or †‡BIOL 3023 or †‡BIOL 3863/ BIOL 3861L
4 † PHYS 2013/ PHYS 2011L College Physics I
3 † Core from area g (if needed) or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
17-18 semester hours

Spring Semester 3
3-4 †‡ BIOL 3023 or †‡BIOL 3863/ BIOL 3861L or †‡ BIOL elective (3000 level or above)
1 BIOL 2001 Bibliographic Practicum
4 † PHYS 2033/ PHYS 2031L College Physics II
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
14-15 semester hours

Fall Semester 4
3-4 †‡ BIOL 3023 or BIOL 3863/ BIOL 3861L or BIOL 4304/4300L
3-4 †‡ BIOL 3000-4000 Level Elective (Botany, Microbiology, or Zoology group as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15-17 semester hours

Spring Semester 4
3-4 †‡ BIOL 3000-4000 Level Elective (Botany, Microbiology, or Zoology group as needed)
3-4 †‡ BIOL 3000-4000 Level Elective (Botany, Microbiology, or Zoology group as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †‡ Upper Level Elective in Fulbright College (if needed for 24-hour rule) or General Elective
15-17 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for Departmental Honors in Biology: The biological sciences honors program is designed to provide students an opportunity to investigate questions in biology through an expanded reading program and research experience. Biological science majors may apply to enter the program between the second semester of the sophomore year and the end of the junior year. Application is made through both Honors Studies (MAIN 517) and the Department of Biological Sciences (SCEN 601). Applicants must have a 3.25 grade-point average. Students should consult with their adviser to identify and contact a potential faculty research mentor. The student’s research activities will then be directed by the departmental faculty member who agrees to sponsor the student.

Students may enroll for up to four hours of credit in BIOL 399VH during the junior year and up to eight hours of credit in BIOL 499V during the senior year. A maximum of six of these credits may be applied toward a major. Participants must complete and defend an honors thesis and take 12 hours in Honors Studies, which may include six hours of thesis. The honors thesis is based on an original research project and presented orally before a committee composed of two faculty from the biological sciences, a person from outside the biological sciences, and a representative from the Honors Council. This committee makes a recommendation concerning the award of the honors distinction to the Honors Council. Students who successfully complete the departmental honors program usually graduate as “Departmental Scholar Cum Laude.” Higher degree distinctions are recommended only in exceptional cases and are based upon the candidate’s entire involvement in the honors program. Completion of an honors thesis fulfills the writing requirement in biological sciences, which precludes credit for BIOL 498V (Senior Thesis) for the same body of work.

Writing Requirement: The college writing requirement for majors in biology may be met by one of the following:
1. Completion of an honors thesis,
2. Completion of a senior thesis (BIOL 498V) supervised by a faculty member in biological sciences,
3. Completion of a required term paper with a grade of B or above in a course numbered above 3000 on a topic approved by the instructor, or
4. Completion of a paper, supervised by a faculty member, in Special Problems (BIOL 480V)

Requirements for a Minor in Biology: Students must take BIOL 1543/1541L, or equivalent, and one course from five of the six areas of specialization outlined in the requirements for a B.A. degree in biology. Students must notify the Fulbright College Dean’s Office of their intent to minor in biology using the Program Update form.

Biology (B.A. or B.S.) Life/Earth Science Teacher Licensure Requirements: Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students interested in teaching science in middle school should consult with a middle level adviser in the College of Education and Health Professions.

For information on advanced degrees in biology, see the Graduate School Catalog.

SEE PAGE 323 FOR BIOLOGY (BIOL) COURSES

BUSINESS MINOR FOR NON-BUSINESS STUDENTS

The Sam M. Walton College of Business minor requires completion of a minimum of 21 required hours of study (including equivalents) with at least 50 percent of the courses applied toward the minor taken in residence. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

Fulbright College students seeking a minor in the Walton College must notify the Fulbright College Dean’s Office (MAIN 525).

All students seeking a business minor are required to complete the
Walton College computer competency requirement (WCOB 1120) and the following courses:
ECON 2143 Basic Economics Theory and Practice
WCOB 1023 Business Foundations
WCOB 1033 Data Analysis and Interpretation or equivalent

In addition, students must select and complete one of the following concentrations:

**Concentration 1 – General Business**
Select 12 hours from the following courses:
(at least 6 hours must be 3000-4000 level)
WCOB 1012 Legal Environment of Business
WCOB 2013 Markets and Consumers
WCOB 2023 Production and Delivery of Goods and Services
WCOB 2033 Acquiring and Managing Human Resources
WCOB 2043 Acquiring and Managing Financial Resources
Plus any other 3000- or 4000-level Walton College course

**Concentration 2 – Accounting**
ACCT 3013 Accounting View of Economic Events
ACCT 3613 Managerial Uses of Accounting Info
Plus an additional six hours selected from the following:
ACCT 3533 Accounting Technology
ACCT 3723 Financial Reporting and Analysis
ACCT 3843 Fundamentals of Taxation

**Concentration 3 – Business Economics**
ECON 4333 Economics of Organizations
Plus an additional 9 hours of 3000- or 4000-level business economics courses

**Concentration 4 – Enterprise Resource Planning**
WCOB 2013 Markets and Consumers
WCOB 2043 Acquiring and Managing Financial Resources
WCOB 4213 ERP Fundamentals
Plus an additional three hours from the following:
ISYS 4233 Seminar in ERP Development
ISYS 4293 Business Intelligence
WCOB 4223 Configuration and Implementation

**Concentration 5 – Enterprise Systems**
ISYS 4453 Introduction for Enterprise Servers
ISYS 4463 Enterprise Transaction Systems
Plus an additional six hours from the following:
ISYS 4133 Business Development
ISYS 4233 Seminar in ERP Development
ISYS 4293 Business Intelligence
WCOB 4213 ERP Fundamentals
WCOB 4223 Configuration and Implementation

**Concentration 6 – Finance**
WCOB 2043 Acquiring and Managing Financial Resources
Plus an additional nine hours of 3000- or 4000-level finance courses.

**Concentration 7 – Information Systems**
ISYS 3293 System Analysis and Design
ISYS 3393 Business Applications and Visual Basic
Plus an additional six hours from the following:
WCOB 4213 ERP Fundamentals
WCOB 4223 Configuration and Implementation
One three hour 4000 level ISYS class

**Concentration 8 – International Business**
Select 12 hours from the following:
ECON 3843 Economic Development, World Bank, and Multilateral Finance
ECON 3853 Emerging Markets
ECON 3933 Japanese Economics
ECON 4633 International Trade
ECON 4643 International Macroeconomics and Finance
ECON 4653 Global Competition and Strategy
ECON 468V International Economics and Business Seminar
FINN 3703 International Finance
MGMT 4583 International Management
MGMT 4833 International Marketing
TLOG 4643 International Transportation Logistics

**Concentration 9 – Management**
MGMT 4243 Ethics and Corporate Responsibility
Plus an additional 9 hours of 3000- or 4000-level management courses (except WCOB 3016)

**Concentration 10 - Marketing**
MGKT 3433 Principles of Marketing
Plus an additional 9 hours selected from the following:
MGKT 3533 Promotional Strategy
MGKT 4033 Selling and Sales Mgmt.
MGKT 4133 Marketing Research
MGKT 4553 Consumer Behavior
MGKT 4833 International Marketing
MGKT 4933 Retail Marketing Strategy
MGKT 4943 Retail Buying and Merchandise Control
TLOG 3613 Business Logistics

**Concentration 11 – Transportation and Logistics**
TLOG 3443 Principles of Transportation
TLOG 3613 Business Logistics
Plus an additional 6 hours selected from the following:
TLOG 3623 Purchasing and Inventory Systems
TLOG 4633 Transportation Carrier Management
TLOG 4643 International Transportation & Logistics
TLOG 4653 Transportation and Logistics Strategy

In addition to the above course requirements, non-business-degree-seeking students seeking a minor should note the following:

1. Students who elect to obtain a business minor must provide written notice of their intent to minor to the dean’s office of the college in which they are receiving a degree. This notice and all requirements for the business minor must be completed prior to the awarding of the student’s undergraduate degree.
2. Business minor students must complete all 1000- and 2000-level courses required for the business minor and be a junior- or senior-level student to enroll in 3000- or 4000-level business courses.
3. All specific course prerequisites must be met. Although business minor students are not required to satisfy the entire pre-business core, they must complete the required courses and any other prerequisite course specified prior to enrolling in a 3000/4000-level course.
4. ECON 2143 will substitute for ECON 2013/2023 for prerequisite purposes. In addition, students who take both ECON 2013 (Macroeconomics) and ECON 2023 (Microeconomics) will satisfy the economics requirements of the minor.
5. Business minor students are ineligible to take WCOB 3016 (Business Strategy and Planning).
6. Non-business students may substitute equivalent courses for the Walton College computer competency requirement. All equivalences must be approved by the associate dean for academic affairs.

**CHEMISTRY AND BIOCHEMISTRY (CHBC)**
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Chair of the Department
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E-mail: cheminfo@uark.edu

- Distinguished Professors Millett, Pulay, Schäfer, Wilkins
- University Professors Cordes, Hinton, Koepppe
• University Professor Emeritus Fry
• Professors Bobbitt, Davis, Durham, Gawley, Geren, Sears, Yu
• Professors Emeriti Blyholder, Howick, Johnson, Meyer, Thoma
• Associate Professors Allison, Fritsch, McIntosh, Paul, Peng, Sakon, Stites
• Assistant Professor Tian, Vicic
• Adjunct Professor Becker
• Adjunct Associate Professors Edkins, Turnbull

Requirements for a B.S. degree with a Major in Chemistry:
A minimum of 40 semester hours in chemistry including CHEM 1213/1211L, CHEM 1223/1221L, (or CHEM 1103/1101L, CHEM 1123/1121L), CHEM 2262, CHEM 2272, CHEM 3504, CHEM 3512L, CHEM 3514, CHEM 3703/3702L, CHEM 3713/3712L, CHEM 4123, CHEM 4213/4211L, CHEM 4723, and at least one additional advanced lecture course with 3514 as a prerequisite is required. On the basis of scores on the Freshman Chemistry Proficiency Examination, a student may be advised to enroll in CHEM 1123/1121L, and upon receiving a grade of “C” or better in these courses, will also receive credit for CHEM 1103/1101L. A minimum of 18 hours of science outside of chemistry and including mathematics through MATH 2574 and physics through PHYS 2074 are required. These mathematics and physics courses are prerequisites for some advanced courses and should be scheduled early in the student’s program. Some work in the biological sciences is recommended. This program meets the minimum requirements for certification by the American Chemical Society if CHEM 3813 (or CHEM 5813/5843) is included. Sample schedules may be obtained from the department of chemistry and biochemistry. Prospective students should consult a departmental adviser.

Chemistry B.S. Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area. This program meets the minimum requirements for certification by the American Chemical Society if CHEM 3813 (or CHEM 5813/5843) is included.

Fall Semester 1
3 ENGL 1013 Composition I
4 †MATH 2554 Calculus I
4 CHEM 1213/1211L Chem for Majors I or CHEM 1103/1101L University Chem I
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
17 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
4 †MATH 2564 Calculus II
4 CHEM 1223/1221L Chem for Majors II or CHEM 1123/1121L University Chem II
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
17 semester hours

Fall Semester 2
4 †MATH 2574 Calculus III
4 †PHYS 2054/2050L University Physics I

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a B.S. degree with a Major in Chemistry, Biophysical Option: A minimum of 43 semester hours in chemistry including CHEM 1213/1211L, CHEM 1223/1221L, (or CHEM 1103/1101L, CHEM 1123/1121L), CHEM 2262, CHEM 2272, CHEM 3504, CHEM 3603/3601L-3613/3611L or CHEM 3703/3702L, CHEM 3713/3712L, CHEM 3514/3512L, CHEM 4123, CHEM 4213/4211L, CHEM 4723, CHEM 4853 or completion of a senior thesis based on independent research wherein at least 1 credit hour is earned in CHEM 500V (chemistry research) and/or CHEM 4981 (senior thesis) during each of 3 different semesters, and 6 hours from CHEM 5813-5843 or CHEM 3813-4723, MATH 2554 and MATH 2564, PHYS

Spring Semester 2
4 †PHYS 2074/2070L University Physics II
5 †CHEM 3713/3712L Organic Chemistry II for majors
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
15 semester hours

Fall Semester 3
4 †CHEM 3504 Physical Chemistry I
4 †CHEM 2262/2272 Analytical Chemistry
3-4 BIOL 1543/1541L or Core from areas a, b, c or e (as needed)
3 Core from area f (if needed) or Core from areas a, b, c or e (as needed)
14-15 semester hours

Spring Semester 3
6 †CHEM 3514/3512L Physical Chemistry II
3 †Advanced Level Elective Course
3 Core from area f (if needed) or Core from areas a, b, c or e (as needed)
3-4 BIOL 1543/1541L (if still needed) or Core from areas a, b, c or e (as needed)
15-16 semester hours

Fall Semester 4
3 †CHEM 4123 Advanced Inorganic Chemistry I
3 †CHEM 4723 Experimental Methods in Organic & Inorganic Chemistry
3 †CHEM 3813 Introduction to Biochemistry
3 CHEM elective
3 Core from areas a, b, c or e (as needed)
15 semester hours

Spring Semester 4
4 †CHEM 4213/4211L Instrumental Analysis
3 †CHEM 4843H or CHEM 4043 or CHEM 5273
3 Elective Course
3 Elective Course
3 Elective Course
16 semester hours

Spring Semester 4
2054/2050L and PHYS 2074/2070L, and 11 hours from the biological sciences, to include BIOL 1543/1541L, BIOL 2533/2531L, and one additional lecture course numbered above 3000. The mathematics and physics courses are prerequisites for some advanced courses and should be scheduled early in the student's program.

Chemistry B.S. Eight-Semester Degree Program with Biophysical Option

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
4 CHEM 1103/1101L University Chemistry I
4 †MATH 2554 Calculus I
3 Core from areas a, b, c or e (as needed)
14 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
4 †MATH 2564 Calculus II
4 CHEM 1123/1121L University Chemistry II
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
17 semester hours

Fall Semester 2
4 †‡CHEM 3603/3601L Organic Chemistry I
4 †‡PHYS 2054/2050L University Physics I
4 BIOL 1543/1541L Principles of Biology
3 Core from areas a, b, c or e (as needed)
15 semester hours

Spring Semester 2
4 †‡CHEM 3613/3611L Organic Chemistry II
4 †‡PHYS 2074/2070L University Physics II
4 †‡BIOL 2553/2531L Cell Biology
2 †CHEM 2262 Analytical Chemistry
3 †Core from area f (if needed) or †Advanced Level Elective
17 semester hours

Fall Semester 3
2 †CHEM 2272 Analytical Chemistry Lab
4 †‡CHEM 3504 Physical Chemistry I
3 †Core from area f (if needed) or †Advanced Level Elective
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
15 semester hours

Spring Semester 3
6 †‡CHEM 3514/3512L Physical Chemistry II
4 †‡CHEM 4213/4211L Instrumental Analysis
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
16 semester hours

Fall Semester 4
3 †‡CHEM 5813 Biochemistry I

3 †‡BIOL 3000/4000 Level Elective
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
15 semester hours

Spring Semester 4
3 †‡CHEM 5843 Biochemistry II
3 †‡CHEM 4853 Biochemistry Techniques
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
3 General Elective
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000–4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a B.S. degree with a Major in Chemistry, Biochemistry Option: A minimum of 39 semester hours in chemistry including CHEM 1213/1211L, CHEM 1223/1221L (or CHEM 1103/1101L, CHEM 1123/1121L), CHEM 2262, CHEM 2272, either CHEM 3504-3514/3512L or CHEM 3453/3451L, CHEM 3703/3702L, CHEM 3713/3712L, CHEM 4853 or completion of a senior thesis based on independent research wherein at least 1 credit hour is earned in CHEM 500V (chemistry research) and/or CHEM 498V (senior thesis) during each of 3 different semesters, CHEM 5813-5843 or CHEM 3813-4723, and either CHEM 4213/4211L or CHEM 4123, additional required courses to include MATH 2554 and 2564, either PHYS 2013/2011L, PHYS 2033/2031L or PHYS 2054/2050L, PHYS 2074/2070L, and 15 hours of biological sciences to include BIOL 1543/1541L, BIOL 2533/2531L, BIOL 2013/2011L, and either BIOL 4233 or BIOL 2233/2232L. The mathematics and physics courses are prerequisites for some advanced courses and should be scheduled early in the student's program.

Chemistry B.S. Eight-Semester Degree Program with Biochemistry Option

Students wishing to follow the eight-semesterto degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area. This program meets the minimum requirements for certification by the American Chemical Society if CHEM 3813 (or CHEM 5813/5843) is included.

Fall Semester 1
3 ENGL 1013 Composition I
3-5 MATH 1213 Plane Trig. or MATH 1285 PreCalculus or †MATH 2554 Calculus I
4 CHEM 1213/1211L Chem for Majors I or CHEM 1103/1101L University Chem I
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed) if not taking MATH 1285
16-18 semester hours
Spring Semester 1
3 ENGL 1023 Composition II  
4 †MATH 2554 Calculus I or †MATH 2564 Calculus II  
4 CHEM 1223/1221L Chem for Majors II or CHEM 1123/1121L University Chem II  
3 Core from areas a, b, c or e (as needed)  
1 General Elective  
15 semester hours

Fall Semester 2
4 †MATH 2564 Calculus II (if needed) or Core from areas a, b, c or e (as needed)  
3-4 †PHYS 2013/2011L College Physics I or †PHYS 2054/2050L University Physics I (PHYS 2054 is better for students interested in graduate school.)  
5 ‡‡CHEM 3703/3702L Organic Chemistry I for majors  
3 Core from areas a, b, c or e (as needed)  
15-16 semester hours

Spring Semester 2
4 †PHYS 2033/2031L College Physics II or †PHYS 2074/2070L University Physics II (PHYS 2074 is better for students interested in graduate school.)  
5 ‡‡CHEM 3713/3712L Organic Chemistry II  
4 BIOL 1543/1541L Principles of Biology  
2 ‡‡CHEM 2262 Analytical Chemistry Lecture  
15 semester hours

Fall Semester 3
4 ‡‡CHEM 3453/3451L Elements of Physical Chemistry  
2 † CHEM 2272 Analytical Chemistry Laboratory  
4 †Biol 2533/2531L Cell Biology  
3 ‡‡Core from area f (if needed) or Core from areas a, b, c or e (as needed)  
3 Core from areas a, b, c or e (as needed)  
16 semester hours

Spring Semester 3
3 ‡‡Core from area f (if needed) or Core from areas a, b, c or e (as needed)  
3-4 †‡CHEM 4213/4211L Instrumental Analysis or ‡‡CHEM 4123 Adv. Inorganic Chem. I  
4 †BIOL 2013/2011L General Microbiology  
3 General Elective  
3 Core from areas a, b, c or e (as needed)  
16-17 semester hours

Fall Semester 4
3 ‡‡CHEM 4813H Biochemistry I  
3-4 †‡BIOL 2323/2321L General Genetics or ‡‡BIOL 4233 Microbial Genetics  
3 Core from areas a, b, c or e (as needed)  
3 Core from areas a, b, c or e (as needed)  
3 Core from areas a, b, c or e (as needed)  
15-16 semester hours

Spring Semester 4
3 ‡‡CHEM 4843H Biochemical Techniques  
3 ‡‡CHEM 4853 Biochemical Techniques  
3 Core from areas a, b, c or e (as needed)  
3 General Elective  
3 General Elective  
0-3 General Elective (at least two hours if needed to complete 124 hour requirement)  
15-18 semester hours

124 Total Hours
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a B.A. degree with a Major in Chemistry:  
Pre-medical students, prospective secondary school science teachers, and others who do not intend to pursue professional careers in chemistry may satisfy the requirements by completing CHEM 1213/1211L, CHEM 1223/1221L, (or CHEM 1103/1101L, CHEM 1123/1121L), CHEM 2262, CHEM 2272, and 18 additional semester hours in chemistry to include CHEM 3703/3702L-3713/3712L or CHEM 3603/3601L-3613/3611L, and either CHEM 3453/3451L, or the combination CHEM 3504-3514-3512L and two additional lecture courses numbered above 3000. PHYS 2033/2031L and MATH 2554 or MATH 2043 are prerequisites for CHEM 3453, and PHYS 2074 and MATH 2574 are prerequisites for the alternate physical chemistry course sequence CHEM 3504-3514-3512L. These physics and mathematics prerequisite requirements are substantial, and these courses and their prerequisites should be scheduled early in the student’s program. Sample schedules may be obtained from the department of chemistry and biochemistry. Prospective students should consult a departmental adviser.

Chemistry B.A. Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I  
3-4 MATH 1203 (if required) or †MATH 2043 or †MATH 2554 (as advised)¹  
4 CHEM 1223/1221L University CHEM II  
3 Core from areas a, b, c or e (as needed)  
16-17 semester hours

Spring Semester 1
3 ENGL 1023 Composition II  
3-4 †MATH 2043 Survey of Calculus or MATH 2554 Calculus II (as advised)¹  
3 CHEM 1123/1121L CHEM for Majors I orCHEM 1103/1101L University CHEM I  
3 Core from areas a, b, c, d or e (as needed)  
3 Core from areas a, b, c, d or e (as needed)  
16-17 semester hours

Fall Semester 2
3 †‡CHEM 3703/3702L Organic I for Majors or †‡CHEM 3603/3601L Organic I  
4 †PHYS 2033/2031L College Physics I
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Elective
17-18 semester hours

Spring Semester 2
4-5 †‡CHEM 3713/3712L Organic II for Majors or †‡CHEM 3613/3611L Organic II
4 †PHYS 2023/2021L College Physics II
3 †Core from group g (if needed) or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Elective
17-18 semester hours

Fall Semester 3
2 †CHEM 2262 Analytical Lecture
4 †‡CHEM 3453/3451L Elements of Physical CHEM
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Elective
15 semester hours

Spring Semester 3
3 †Core from group g (if needed) or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from Biological Sciences group f
16 semester hours

Fall Semester 4
3 †‡CHEM 3813 Introduction to Biochemistry or †‡4813H Biochemistry I
2 †CHEM 2272 Analytical Lab
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †‡Upper Level Fulbright College Elective
1 Elective
15 semester hours

Spring Semester 4
3-4 †‡CHEM Elective (recommend CHEM 4853H Biochemistry II or †‡4213/4211L Exp Methods)
3 Core from areas a, b, c, d or e (as needed)
3 †‡Upper Level Fulbright College Elective
3 †Advanced Level Elective
3 General Elective (if needed to complete 124 hours)
12-16 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a B.A. degree with a Major in Chemistry, Biochemistry Option: A minimum of 32 semester hours in chemistry including CHEM 1213/1211L, CHEM 1223/1221L, (or CHEM 1103/1101L, CHEM 1123/1121L), CHEM 2262, CHEM 2272, either CHEM 3453/3451L or CHEM 3504-3514-3512L, either CHEM 3603/3601L-3613/3611L or CHEM 3703/3702L-3713/3712L, CHEM 4853 or completion of a senior thesis based on independent research wherein at least 1 credit hour is earned in CHEM 500V (chemistry research) and/or CHEM 498V (senior thesis) during each of 3 different semesters, and either CHEM 5813-5843 or CHEM 3813-4213/4211L or CHEM 3813-4123 or CHEM 3813-4723, MATH 2554 or MATH 2043, PHYS 2013/2011L-2033/2031L or 2054-2074, and 11 hours from the biological sciences, at least 3 hours of which must be upper-level courses. The mathematics and physics courses are prerequisites for some advanced courses and should be scheduled early in the student’s program.

Chemistry B.A. Eight-Semester Degree Program with Biochemistry Option

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-4 †MATH 2554 Calculus I or other mathematics course as advised for major¹
4 CHEM 1213/1211L Chem for Majors I or 1103/1101L University Chem I
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16-17 semester hours

Spring Semester 1
4 †‡CHEM 2262/2272 Analytical Chem
4 †‡CHEM 3453/3451L Elements of Physical CHEM
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from Biological Sciences group f
16 semester hours

Fall Semester 2
5 †‡CHEM 3703/3702L Organic Chem I for Majors

Spring Semester 2
4 BIOL 1543/1541 Principles of Biology
4 †‡CHEM 2262/2272 Analytical Chem
4 †‡CHEM 2054/2050L University Physics I or †‡PHYS 2013/2011L College Physics I
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
17 semester hours

Fall Semester 3
5 †‡CHEM 3703/3702L Organic Chem I for Majors

¹ Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
² Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.
4 †‡CHEM 3453/3451L Elements of Physical Chem or CHEM 3504 Physical Chem
3 †Core from area g (if needed) or Core from areas a, b, c, d or e (as needed)
4 †‡Upper Level Biology Elective
16 semester hours

Spring Semester 3
5 †‡CHEM 3713/3712L Organic Chem II for Majors
6 †‡CHEM 3514/3512L Physical Chem II or †‡CHEM Elective
3000-4000 Level and Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
14 semester hours

Fall Semester 4
3 †‡CHEM 3813 Introduction to Biochemistry or †‡CHEM 4813H
3 †‡CHEM 4123 Advanced Inorganic Chem I
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 4
3 †‡CHEM 4853 Biochemical Techniques
3 †‡CHEM 4843H or †‡3113 Intermediate Inorganic Chem or †‡4043 Environmental Chem
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

124 Total Hours
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Writing Requirement: Chemistry majors will satisfy the Fulbright College writing requirement by satisfactory completion of the formal research/analytical reports required in Physical Chemistry Laboratory, CHEM 3451L, or CHEM 3512L.

Requirements for Departmental Honors in Chemistry: Students with good academic backgrounds and strong interests in research are encouraged to participate in the department of chemistry and biochemistry honors program. Entrance into the program is normally during the sophomore year or the first semester of the junior year, and a minimum cumulative GPA of 3.25 is required. Entrance is initiated by consulting the faculty advisor, which will guide and arrange conferences with potential faculty research project advisers. When there is agreement between the student and the adviser on a research project or area, an Honors Advisory Committee is set up to supervise the candidate’s program. The heart of the program is the research project, but students are encouraged to broaden their experience beyond required courses within chemistry, the natural sciences, the social sciences, and the humanities. Participation in Honors Colloquia, honors sections of regular courses, and chemistry departmental and divisional seminars is especially recommended. All honors candidates enroll in the spring semester Honors Seminar (CHEM 4011H), and senior honors students must make at least one seminar presentation. All honors candidates will be required to complete and defend an honors thesis and take 12 hours (which may include 6 hours of thesis) in Honors Studies. The thesis is required in the spring semester of the senior year, followed by an oral presentation. On the basis of these written and oral reports and their evaluation of all aspects of the student’s honor program, the candidate’s Honors Advisory Committee will recommend whether or not the distinction “Chemistry or Biochemistry Scholar Cum Laude” should be awarded. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

Requirements for a Minor in Chemistry: 18 hours of courses above the 1000 level including CHEM 2262, CHEM 2272, CHEM 3603/3601L, CHEM 3613/3611L, CHEM 3453, and a 3-hour course at the 3000-4000 level. A student must notify the department of his or her intent to minor.

Chemistry (B.A. or B.S.) Physical/Earth Science Teacher Licensure Requirements:

1. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 GREK or LATN 1003 Elementary Classical Language I
3 Core from areas a, b, d, or e (as needed)
3 Core from areas a, b, d, or e (as needed)
Spring Semester 1
3 ENGL 1023 Composition II
3-4 † MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, d, or e (as needed)
3 GREEK or LATN 1013 Elementary Classical Language II
3 CLST 1013 Introduction to Classical Studies: Rome (Meets WLIT 1123 requirement in core area d.)
3 Core from areas a, b, d, or e (as needed)
15-16 semester hours

Fall Semester 2
3 GREEK or LATN 2003 Intermediate Classical Language I
3 GREEK or LATN 1003 Elementary Classical Language I (alternative language recommended but not required) or General Elective
3 Core from areas a, b, d, or e (as needed)
3 Core from areas a, b, d, or e (as needed)
3 CLST 1003 Introduction to Classical Studies: Greece
15 semester hours

Spring Semester 2
3 GREEK or LATN 2013 Intermediate Classical Language II
3 GREEK or LATN 1013 Elementary Classical Language II (alternative language recommended but not required) or General Elective
3 † Core from area g (if required) or † Advanced Level Elective
4 Core from area f (as needed)
3 Core from areas a, b, d, or e (as needed)
16 semester hours

Fall Semester 3
3 † † GREEK or LATN Advanced Language
3 GREEK or LATN 2003 Intermediate Classical Language I (alternative language recommended but not required) or General Elective
3 † Core from area g (if required) or † Advanced Level Elective
3 Core from areas a, b, d, or e (as needed)
3 Core from areas a, b, d, or e (as needed)
1 General Elective
16 semester hours

Spring Semester 3
3 † † GREEK or LATN 2013 Intermediate Classical Language II (alternative language recommended but not required) or General Elective
3 † † CLST 4003H Honors Classical Studies or † † Classical Studies Elective
3 Core from areas a, b, d, or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 † † Classical Studies Elective
3 † † Classical Studies Elective
3 Core from areas a, b, d, or e (as needed)
3 Core from areas a, b, d, or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 4
3 † † Classical Studies Elective
3 † † Classical Studies Elective
3 † † CLST 4003H Honors Classical Studies (if needed) or † † Classical Studies Elective
3 † Advanced Level Elective
3 † Upper-Level ARSC Elective
15 semester hours

124 Total Hours
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Minor in Classical Studies: Students should select appropriate courses from the following areas:
1. 9 hours of Ancient Greek or Latin courses numbered above 2000,
2. 6 hours of additional work in classical languages and/or specific classical studies-related electives, to be selected from the following courses: ARCH 2233, ARHS 4833, ARHS 4843, CLST 1003, CLST 1013, HIST 4003, HIST 4013, HIST 4023, HIST 4043, HIST 4053, PHIL 4003, PHIL 4013, PHIL 4023, PLSC 3953, WLIT 2323,
3. Three hours of a classical studies colloquium (CLST 4003H).

Requirements for Honors in Classical Studies: The Honors Program in Classical Studies gives students of high ability the opportunity to strengthen their study of classics by intensifying their experience with ancient languages and cultures.
In addition to the requirements for graduation with a major in classical studies and the general college requirements for a B.A. degree, honors candidates in classical studies must
1. be accepted as honors candidates by the Classical Studies Committee,
2. complete at least three semesters in a second classical language,
3. enroll in at least two 1-hour units of CLST 399VH and pursue independent-study topics under the guidance of classical studies faculty,
4. enroll for two hours of CLST 399VH and write an honors thesis, and
5. defend and discuss their entire honors program in an oral examination.
Successful completion of the requirements will be recognized by the award of the distinction “Classical Studies Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

SEE PAGE 334 FOR CLASSICAL STUDIES (CLST) COURSES

COMMUNICATION (COMM)

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• Professors Frentz, Smith (S.), Webb
• Professor Emeritus Rea, Rogers
• Associate Professors Allen, Amason, Bailey, Brady, Rosteck, Scheide, Warren, Wicks
• Assistant Professor Chung
• Research Assistant Professor Smith (L.)
• Assistant Professor Emeritus Galloway
• Adjunct Assistant Professor Cowling

As a subject for academic study, communication bridges the humanities and the social sciences. It focuses on relationships — personal, group, and societal — and the factors and processes that
affect important relationships. Friendships and families, business relationships and political systems, cultural interaction and technological advances are important areas of study in communication. Communication students may concern themselves with the dynamics of interpersonal persuasion, the effects of media technologies, the nature of gender stereotypes, the function of roles within the family, the structure of organizational authority, the influence of cultural myths, the impact of social movements, and the history of rhetoric. Because the program offers many diverse interests, there is a place for anyone with a genuine curiosity about human communication and its effect upon society.

Communication majors from recent graduating classes now hold responsible positions in government and public affairs, in management, marketing, and public relations within private business, and in television and mass media organizations. Many others are successfully pursuing further education in graduate and professional schools. The department of communication offers general studies of the discipline, as well as concentration in three specific emphasis areas:

1. rhetoric and public communication,
2. interpersonal, small group, and organizational communication, and
3. mass communication.

Students may also select a program for acquisition of teaching certification in the field.

Admission Requirements for a Major in Communication: For standing as a major, entering freshmen must have ACT composite scores of 20 or higher, and those transferring into the program after the first semester of college study must have a cumulative grade-point average of 2.00 or higher.

University and College Requirements for a Major in Communication: 36 semester hours in communication courses, to include COMM 2333, COMM 3343, COMM 3443, COMM 3673, at least 12 additional hours chosen from COMM courses above 3000. Communication courses used to satisfy the college or University Core requirements will not count toward the major. To graduate, students must have a cumulative grade-point average of 2.00 or above within the major.

Writing Requirement: The college writing requirement may be satisfied by a research paper submitted for an upper-division communication class and approved by the chairman of the department.

Requirements for Departmental Honors in Communication: The Honors Program in communication gives an opportunity for a student to achieve an additional level of intellectual growth and a satisfaction of accomplishment. A student engages in independent research and writing, under the supervision of a member of the communication faculty, and participates in special honors classes, seminars, and colloquia.

Faculty recognize outstanding achievement by a student by recommending that the bachelor’s degree in communication be awarded with the distinction “Communication Scholar Cum Laude.” Higher distinctions may be awarded to truly outstanding students based upon the whole of their academic program and quality of honors research.

To enter the Honors Program, a student must satisfy departmental honors requirements, which include the following:
1. become an honors candidate no later than the first semester of the junior year of study,
2. enroll in COMM 399VH, Honors Course, a minimum of one hour of credit each semester during the junior-senior years,
3. achieve a 3.25 minimum grade-point average in communication,
4. take 12 hours, which may include 6 hours of thesis in Honors Studies, and
5. write and defend before a faculty examining committee a thesis based on the investigative or creative project undertaken in COMM 399VH.

For a full description of the Honors Program and its requirements, consult with an adviser in the department of communication.

Communication Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Area Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 COMM 1313 Fundamentals of Communication
3 Core from areas b, c, d or e (as needed)
3 Core from areas b, c or d (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183 or 2554 or Core from areas b, c, d or e (as needed)
3 Core from areas b, c, d or e (as needed)
4 Core from area f (as needed)
3 Core from areas b, c, d or e (as needed)
16-17 semester hours

Fall Semester 2
3 COMM 2333 Comm Research or any 2000 level COMM class
4 Core from area f (as needed)
3 Core from areas b, c, d or e (as needed)
3 Core from areas b, c, d or e (as needed)
3 Core from areas b, c, d or e (as needed)
16 semester hours

Spring Semester 2
3 †Core from area g (if required) or †Advanced Level Elective
3 COMM 2333 Comm Research or any 2000, †‡3000 or †‡4000 level class
3 Core from areas b, c, d or e (as needed)
4 Core from area f (as needed)
3 Core from areas b, c, d or e (as needed)
16 semester hours

Fall Semester 3
3 †‡ COMM upper level requirement or any †‡3000 or †‡4000 level class
3 †‡ COMM upper level requirement or any †‡3000 or †‡4000 level class

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Spring Semester 3
3 ‡‡COM upper level requirement (as needed) or any ‡‡3000 or ‡‡4000 level class
3 ‡‡COM upper level requirement (as needed) or any ‡‡3000 or ‡‡4000 level class
3 Core from areas b, c, d or e (as needed)
3 Core from areas b, c, d or e (as needed)
3 General Elective
15 semester hours

Fall Semester 4
3 ‡‡COM upper level requirement (as needed) or any ‡‡3000 or ‡‡4000 level class
3 ‡‡COM upper level requirement (as needed) or any ‡‡3000 or ‡‡4000 level class
3 Core from areas b, c, d or e (as needed)
3 Core from areas b, c, d or e (as needed)
3 General Elective
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter.
‡ Meets 24-hour rule (24 hours of 3000–4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Minor in Communication: 18 hours including COMM 2303 and COMM 2323. At least 9 hours must be numbered 3000 or above. A student should consult with an adviser in the department of communication for the selection of appropriate courses. A student must notify the department of his or her intent to minor.

Communication (B.A.) Drama/Speech Teacher Licensure Requirements:
Please refer to the Secondary Education Requirements for Fulbright College Students on page XX.

SEE PAGE 261 FOR COMMUNICATION (COMM) COURSES
The Department of Drama offers the Bachelor of Arts (B.A.) degree in Drama, a broad spectrum program in the context of a liberal arts education, and the Master of Fine Arts (M.F.A.) degree in six concentrations: Acting, Directing, Playwriting, Costume Design, Scene Design and Lighting Design. (Please see the Graduate Catalog for information regarding the MFA degree.) Classes at both undergraduate and graduate levels are focused on providing a strong, professional orientation to theatre performance and technology in conjunction with appropriate research-based course work to address the required foundations in theatre history, dramatic literature and dramatic criticism.

The educational objectives of the Department of Drama are centered on producing graduates prepared to enter the competitive world of professional play production as well as a variety of teaching and research fields. In addition a background in Drama has proven to be a valuable asset to those wishing to pursue a wide range of corporate and industrial occupations.

The play production program is the “laboratory” for study in Drama. To that end the Department produces an average of 10 plays each year involving students in virtually all aspects of production. Auditions are open to all students on campus.

The Department of Drama also supports course work in Dance, offering a variety of basic and advanced studio courses.

**Requirements for a Major in Drama:** A minimum of 40 semester hours to include 18 semester hours in courses numbered 3000 and above or the prescribed program for teacher licensure in speech education. All drama majors must enroll in the following 23 hours:

- DRAM 1223 Intro. to Dramatic Art
- DRAM 1313/1311L Stage Technology I and Lab: Costumes and Makeup
- DRAM 1323/1321L Stage Technology II and Lab: Scenery and Lighting
- DRAM 1683 Acting I
- DRAM 2133 Introduction to Theatrical Design (DRAM 1323/1321 and DRAM 2683)
- DRAM 2313 Scene Design I (1323/1321)
- DRAM 2683 Stage Management (Pre-req: DRAM 1223, 1683, 1313/1311 and 1323/1321)
- DRAM 3001 Directing I (Pre-req: DRAM 1223, 1683, 1313/1311 and 1323/1321)
- DRAM 3103 Combinatorial and Discrete Mathematics
- DRAM 3903 Theatrical Makeup (DRAM 1313/1311)
- DRAM 3733 Stage Lighting I (DRAM 1313/1311)
- DRAM 4653 Scene Design I (1323/1321)
- DRAM 4733 Dramatic Criticism (DRAM 3803) Fulfills Fulbright College writing requirement
- DRAM 491 Special Topics In Script Analysis/Synthesis
- DRAM 4953 Theatre Study In Britain or a dramatic literature, dramatic criticism or theatre history seminar as approved by the Drama adviser.

Group A: 3 hours to be chosen from:
- DRAM 3653 Directing I (Pre-req: DRAM 1223, 1683, 1313/1311 and 1323/1321 and DRAM 2683)
- DRAM 3683 Stage Management (Pre-req: DRAM 1223, 1683, 1313/1311 and 1323/1321)

Group B: 3 hours to be chosen from:
- DRAM 3213 Costume Design I (DRAM 1313/1311)
- DRAM 3733 Stage Lighting I (DRAM 1323/1321)
- DRAM 3903 Theatrical Makeup (DRAM 1313/1311)
- DRAM 4653 Scene Design I (1323/1321)

Group C: 3 hours to be chosen from:
- DRAM 3803 Development of the Drama (DRAM 1223)
- DRAM 4653 Scene Design I (1323/1321)
- DRAM 4803 Dramatic Criticism (DRAM 3803) Fulfills Fulbright College writing requirement
- DRAM 4463 African American Theatre History
- DRAM 491 Special Topics In Script Analysis/Synthesis
- DRAM 4953 Theatre Study In Britain or a dramatic literature, dramatic criticism or theatre history seminar as approved by the Drama adviser.

Group D: 6 hours of electives to be chosen from the following:
- DRAM 2683, any DRAM course 3000 or above with the exception of DRAM 3001 and 3011.

**Requirements for a Minor in Computer Science:** CENG 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and either CENG 2133 or CSCE 4313.

SEE PAGE 377 FOR COMPUTER SCIENCE (CSCE) COURSES.
In addition, all drama majors are required to take an additional 2 credit hours of DRAM 3001 Theatre Practicum, one hour to be taken each academic year. Consult Drama Adviser for more information on these credits. 

Note: No drama major may present DRAM 1003 to satisfy the college fine arts requirement. 

Writing Requirement: The Fulbright College research/analytical paper requirement for drama majors will be fulfilled in DRAM 4233, DRAM 4333, DRAM 4453, or DRAM 4733. Satisfactory completion of an honors project or senior thesis may fulfill the requirement. 

Senior Progress Review: All drama majors are required, in the semester before graduation, to successfully complete the Senior Progress Review, a faculty assessment of each student’s accomplishments in performance and production. 

Requirements for Departmental Honors in Drama: The Departmental Honors Program in Drama provides upper-division undergraduate students with an opportunity to formally participate in creative and scholarly activities in theatre. Honors candidates engage in independent study and research under the guidance of the drama faculty and participate in special honors seminars and colloquia. Outstanding student achievement will be recognized by awarding the distinction “Drama Scholar Cum Laude” at graduation. In addition to satisfying the general college requirements for the bachelor’s degree with Honors, honors candidates in drama must: 

1. become a candidate no later than the second semester of their junior year, 
2. enroll in honors colloquia when available, 
3. enroll in six hours of honors research DRAM 399VH, 
4. complete and defend in oral examination an honors thesis based upon the project carried out in DRAM 399VH, and 
5. achieve a cumulative grade-point average of 3.25. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the candidate’s entire academic program. Usually these are awarded only to students with a cumulative grade-point average of 3.50 or above, whose project demonstrates a high degree of creativity and scholarship. 

Drama Eight-Semester Degree Program 

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area. 

Fall Semester 1 
3 ENGL 1013 Composition I 
3 DRAM 1223 Introduction to Dramatic Art 
3-4 DRAM 1313/1311L Stage Tech I: Costumes and Makeup/Lab or DRAM 1683 Acting I 
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or †2554 
3 Core from areas a, b, c, d or e (as needed) 
15-16 semester hours 

Spring Semester 1 
3 ENGL 1023 Composition II 
3-4 DRAM 1323/1321L Stage Tech II: Scenery & Lighting/Lab or DRAM 1683 Acting I (as needed) 
3 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 

Fall Semester 2 
3-4 DRAM 1313/1311L Stage Tech I/Lab (if needed) or DRAM 2313 Intro. to Theatrical Design (pre-requisite is DRAM 1323/1321L) 
4 Core from group f (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
16-17 semester hours 

Spring Semester 2 
3-4 DRAM 1323/1321L Stage Tech II: Scenery & Lighting/Lab or DRAM 1683 Acting I (as needed) 
3 ‡‡DRAM group A, B, C or D (as needed) 
3 ‡Core from area g (if still needed) or ‡Advanced Level Elective 
3 Core from areas a, b, c, d or e (as needed) 
4 Core from group f (as needed) 
1 ‡‡DRAM 3001 Theatre Practicum (as needed)* 
16-17 semester hours 

Fall Semester 3 
3 ‡‡DRAM 2313 Intro. to Theatrical Design (if needed) or ‡‡DRAM 4233 History of the Theatre or ‡Advanced Level Elective 
3 ‡‡DRAM group A, B, C or D (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
4 Core from group f (as needed) 
1 ‡‡DRAM 3001 Theatre Practicum (as needed)* 
16-17 semester hours 

Spring Semester 3 
3 ‡‡DRAM 4333 History of the Theatre or ‡Advanced Level Elective 
3 ‡‡DRAM group A, B, C or D (as needed) 
3 Core from area g (if still needed) or ‡Advanced Level Elective 
3 Core from areas a, b, c, d or e (as needed) 
4 Core from group f (as needed) 
1 ‡‡DRAM 3001 Theatre Practicum (as needed)* 
16-17 semester hours 

Fall Semester 4 
3 ‡‡DRAM 4233 History of the Theatre (if needed) or ‡‡DRAM group A, B, C or D (as needed) 
3 ‡‡DRAM group A, B, C or D (if needed) or General Elective 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
1 ‡‡DRAM 3001 Theatre Practicum (as needed)* 
15-16 semester hours 

Spring Semester 4 
3 ‡‡DRAM 4333 History of the Theatre (if needed) or ‡‡DRAM group A, B, C or D (as needed) 
3 ‡‡DRAM group A, B, C or D (if needed) or General Elective 
3 Core from areas a, b, c, d or e (as needed) 
3 Core from areas a, b, c, d or e (as needed) 
3 General Elective 
1 ‡‡DRAM 3001 Theatre Practicum (as needed)* 
15-16 semester hours 

124 Total Hours
*All drama majors are required to take an additional two hours of DRAM 3001 Theatre Practicum, one hour to be taken each academic year. Consult Drama Adviser for more information on these credits.
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Minor in Drama: A minimum of 18 semester hours in drama, including DRAM 1223. One of the following courses or course/lab combinations is also required: DRAM 1313 and 1311L, or DRAM 1323 and 1321L, or DRAM 1683. The remaining hours must be selected from courses at the 3000- or 4000-level, the specific courses to be determined by the student in consultation with a drama department faculty adviser. The student must notify the department of his or her intent to minor.

Drama (B.A.) Drama/Speech Teacher Licensure Requirements:
Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

For requirements for the M.A. and M.F.A. degrees in drama, see the [Graduate School Catalog](#).

**ECONOMICS (ECON)**

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- Phillips Petroleum Chair of International Business and Economics Distinguished Professor Murray
- Margaret Gerig and R.S. Martin Jr. Chair in Business Professor Farmer
- Lewis E. Epley Jr. Professor Ferrier
- Professors Britton, Curington, Dixon, Gay, Horowitz, Ziegler
- Associate Professor Kali
- Clinical Associate Professor Stapp
- Assistant Professors Deck, Lee, Mendez, Reyes
- Visiting Assistant Professors Collins, Littrell

**Requirements for a Major in Economics:** 30 semester hours, including ECON 2143 or ECON 2013 and ECON 2023, ECON 3033, ECON 3133, ECON 4743, and ECON 4033.

**Economics Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)

3 Core from areas a, b, c, d or e (as needed)
15 semester hours

**Spring Semester 1**

3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2554, or 2183 or Core from areas a, b, c, d or e (as needed)
3 †ECON 2023 Prin. of Macroeconomics or ECON 2143 Basic Economics (core credit from area e)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16-17 semester hours

**Fall Semester 2**

3 †ECON 2023 Prin. of Microeconomics or ‡†ECON 3033 Micro. Theory (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
15 semester hours

**Spring Semester 2**

3 †Core from area g (if still needed) or †Advanced Level Elective
3 ‡†ECON 3033 Microeconomic Theory or ‡†ECON 3133 Macroeconomics Theory
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

**Fall Semester 3**

3 ‡†ECON 3133 Macroeconomics Theory or ‡†ECON 4033 History of Economics Thought
3 ‡†ECON 3000-4000 level
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 General Elective
16 semester hours

**Spring Semester 3**

3 ‡†ECON 4033 History of Economics Thought or ‡†ECON 4743 Introduction to Econometrics
3 ‡†ECON 3000-4000 level
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from area f (as still needed) or †Advanced Level Elective
15 semester hours

**Fall Semester 4**

3 ‡†ECON 4743 Introduction to Econometrics or ‡†ECON 3000-4000 level
3 ‡†ECON 3000-4000 level
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 General Electives
16 semester hours

**Spring Semester 4**

3 ‡†ECON 3000-4000 level
3 †Advanced Level Elective
3 †Advanced Level Elective
3 General Elective
3 General Elective
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Major in Economics with Emphasis in International Economics and Business:
1. 30 semester hours of courses, including ECON 2013, ECON 2023, ECON 3033, ECON 3133, ECON 4633, ECON 4643, and 12 hours of international economics and business electives that may be selected from ECON 3843, ECON 4653, ECON 468V, MGMT 4583, or other courses approved by the departmental adviser. Course pre-requisites for non-economics international business courses will count toward this 12-hour requirement. Thus, if a student wants to take MKTG 4833 International Marketing as an international economics and business elective, he/she also must take the prerequisite MKTG 3433 Principles of Marketing. These two courses will satisfy 6 hours of the elective requirement,
2. 9 hours of upper-division course work in Fulbright College that focuses on a country or region of the world related to the foreign language, which might include upper-division courses in the same language, which should emphasize literature or cultural topics. Courses must be approved by the departmental adviser. Students who meet the requirements of the Fulbright College area studies programs in Asian Studies, Russian and Soviet Studies, Latin American Studies, or European Studies will be considered to have fulfilled this requirement,
3. MATH 2043 and MATH 2053 or MATH 2554 and MATH 2564 – these courses fulfill the Fulbright College mathematics requirement.
4. 9 hours of business/stat courses to include WCOB 1033 or STAT 2303 and ACCT 2013 and ACCT 2023,
5. 6 hours of a foreign language at the intermediate level, or above, and
6. 3 hours of upper-division foreign language in the same language covering business communications, or equivalent. Any student whose minimum 6-hour requirement under (#5) above includes an upper-division course may choose to include business communications among the 6 hours of required university course work in the foreign language.

NOTE: It is strongly recommended that economics majors who plan to continue their studies at the graduate level take two semesters of calculus (MATH 2554 and MATH 2564) and linear algebra (MATH 3083).

Economics Eight-Semester Degree Program with Emphasis in International Business
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-4 MATH 1203 or † MATH 2043, 2053 or 2554
3 FLAN 1003 or FLAN 1013
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
15-16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3-4 † MATH 2043, 2053 or 2564 (if MATH 2554 taken in Fall Semester 1)
3 †‡ ECON 2013 Principles of Macroeconomics
3 FLAN 1013 or FLAN 2003
4 Core from group f (as needed)
16-17 semester hours

Fall Semester 2
3 †‡ ECON 2023 Principles of Microeconomics
3 FLAN 2003 or FLAN 2013
3 †‡ MATH 2043 or 2053 (if needed) or General Elective
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
15 semester hours

Spring Semester 2
3 †‡ ECON 3033 Microeconomic Theory
3 †‡ FLAN 2013 or †‡ upper Division Foreign Language
3 WCOB 1033 Data Analysis or STAT 2303 Principles of Statistics
3 Core from areas a, b, d or e (as needed)
4 Core from group f
16 semester hours

Fall Semester 3
3 †‡ ECON 3133 Microeconomic Theory
3 †‡ upper Division Foreign Language
3 International Economics and Business Elective
3 Core from areas a, b, d or e (as needed)
4 Core from group f
16 semester hours

Spring Semester 3
3 †‡ ECON 4633 International Trade Policy
3 † International Economics and Business Elective
3 †‡ upper Division Foreign Language or Core from areas a, b, d or e
3 †‡ Upper Level Area Studies from ARSC
4 Core from group f
16 semester hours

Fall Semester 4
3 †‡ ECON 4643 International Monetary Policy
3 † International Economics and Business Elective
3 Business/Statistics Elective (ACCT 2013 or ACCT 2023)
3 †‡ upper Division Foreign Language or Core from areas a, b, d or e
3 †‡ Upper Level Area Studies from ARSC
3 Core from areas a, b, d or e (as needed)
1 General Elective
16 semester hours

Spring Semester 4
3 Business/Statistics Elective (ACCT 2013 or ACCT 2023)
3 † International Economics and Business Elective
3 †‡ Upper Level Area Studies from ARSC
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
15-18 semester hours

124 Total Hours
Writing Requirement: The Fulbright College writing requirement for economics majors will be fulfilled by the research/analytical paper required in ECON 4033. For economics majors who elect to emphasize international economics and business, the writing requirement will be fulfilled by the research/analytical paper required in ECON 4633 or 4643.

Requirements for Departmental Honors in Economics: The Departmental Honors program provides upper-division students the opportunity to engage in independent study or research under the guidance of an individual member of the faculty. In addition to satisfying the general college requirements for the bachelor’s degree with honors, honors candidates in economics are required to complete and orally defend an honors thesis based upon independent study under ECON 399VH (for 3 to 6 hours) and to have a minimum grade-point average of 3.25. Outstanding student achievement will be recognized by awarding the bachelor’s degree with the distinction “Economics Scholar Cum Laude.” Higher distinctions may be awarded to truly outstanding students based upon the whole of their academic program and quality of honors research.

The following courses, among others in business administration, are given credit toward an economics major for the B.A. degree. For description of these courses, see College of Business Administration section of this catalog.

FINN 3133 Commercial Banking
FINN 3043 Principles of Finance
WCOB 1033 Data Analysis and Interpretation

For the combined major in economics and African-American studies, see page 124.

Requirements for a Minor in Economics: 18 hours in economics. Required courses are ECON 3033 Microeconomic Theory, and ECON 3133 Macroeconomic Theory, plus 12 additional hours in economics, six of which must be in courses numbered 3000 or above.

NOTE: ECON 2013 and ECON 2023, or ECON 2143, are prerequisites to all economics courses numbered above 3000.

Economics (B.A.) Social Studies Teacher Licensure

Requirements:
Please refer to the Secondary Education Requirements for Fulbright College Students on page 114. Students wanting to teach social studies in middle school should consult with a middle level adviser in the College of Education and Health Professions.

SEE PAGE 343 FOR ECONOMICS (ECON) COURSES

ENGLISH (ENGL)

Robert H. Brinkmeyer
Chair of the Department
338 Kimpel Hall
479-575-4301
Web site: http://www.uark.edu/depts/english/
E-mail: English@cavern.uark.edu

- Distinguished Professor Emeriti Guilds, Kinnaman
- University Professors Emeriti Harrison, Van Scyoc, Williams
- Professors Booker, Brinkmeyer, Burris, Candido, Cochran, DuVal, Giles, Hays, Heffernan, Jolliffe, Montgomery, Quinn, Talburt
- Professors Emeriti Bennett, Bolsterli, Guinn, Hart, Rudolph
- Associate Professors Adams (C.), Gilchrist, Kahf, Marren, Slattery, Stephens
- Associate Professors Emeriti MacRae, Park
- Assistant Professors Adams (R.), Cohen, Bernhard, Brook, Jackson, McCombs
- Instructors Lane, Raines

The Department of English offers a major in English, a minor in English, and a combined major in English and journalism.

The major in English is suitable for many purposes, both professional and cultural. By properly selecting courses, the student may prepare for postgraduate work in literature and language; meet the English requirements for secondary teaching licensure; develop writing skills, both in creative and in expository writing; obtain appropriate pre-professional training for areas such as law; or study broadly in the literary culture of English-speaking peoples. A rich variety of courses is offered, and there is opportunity within the major for any student to explore areas of special interest: for example, American literature, the Renaissance, drama, the English language, and modern and contemporary literature.

Requirements for a Major in English: 36 semester hours (not counting ENGL 0003, ENGL 1013, ENGL 1023, and ENGL 2003). These hours must include 12 hours of survey courses, including ENGL 2303; either ENGL 2313 or ENGL 2323; either ENGL 2343 or ENGL 2353; and one additional survey course chosen from ENGL 2313, ENGL 2323, ENGL 2343, and ENGL 2353. Majors must take an additional 12 hours that include ENGL 4303; one of ENGL 3713, ENGL 3723, and ENGL 3733; either ENGL 3743 or ENGL 3753; and one of ENGL 3833, ENGL 3843, ENGL 3853, and ENGL 3863. The remaining twelve hours can be taken in any English course numbered above 3000, with the stipulation that at least six of these hours must be numbered above 4000.

English Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 2
3 †ENGL from Group A below
3 †ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 †Core from area g (if needed) or †Advanced Level Elective
Spring Semester 2
3 †ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Fall Semester 3
3 †ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 ‡†ENGL from Group B or C below
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 3
3 †ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 ‡†ENGL from Group B or C below
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡†ENGL from Group B or C below
3 ‡†ENGL from Group B or C below
3 ‡†ENGL from Group B or C below
3 General Elective
3 General Elective
15 semester hours

Spring Semester 4
3 ‡†ENGL from Group B or C below
3 ‡†ENGL from Group B or C below
3 ‡†ENGL from Group B or C below
3 General Elective
3 General Elective
15 semester hours

124 Total Hours

Group A: Twelve hours chosen from the following:
ENGL 2303 Survey of English literature from Beginning through 17th Century
3 hours from either
ENGL 2313 Survey of English Literature from 1700 – 1900
or
ENGL 2323 Survey of Modern British, Irish, and Postcolonial Literature
3 hours from either
ENGL 2343 Survey of American Literature from the Colonial Period through Naturalism
or
ENGL 2353 Survey of Modern American Literature
3 hours from one of remaining ENGL 2313, ENGL 2323, ENGL 2343 or ENGL 2353

Group B: Twelve hours chosen from the following:
3 hours from either
ENGL 3713 Topics in Medieval Literature and Culture,
ENGL 3723 Topics in Renaissance Literature and Culture, or
ENGL 3733 Topics in English Restoration and 18th Century Literature
3 hours from either
ENGL 3743 Topics in 19th Century British Literature and Culture or
ENGL 3753 Topics in Modern British Literature
3 hours from either
ENGL 3833 Topics in American Literature and Culture to 1900,
ENGL 3843 Topics in Modern American Literature and Culture, 
ENGL 3863 Topics in Literature and Culture of the American South
3 hours of ENGL 4303 Introduction to Shakespeare (required)

Group C:
Twelve additional hours in English courses numbered above 3000, at least six of which must be numbered above 4000.

‡ Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Writing Requirement: All upper-division English courses require a research or an analytical paper except ENGL 4003, and the courses in creative writing (ENGL 3013, ENGL 4013, ENGL 4023, ENGL 4073). For this reason all students who fulfill the requirements for a major in English thereby fulfill the Fulbright College writing requirement.

Requirements for a Major with a Concentration in Creative Writing: 36 semester hours (not counting ENGL 0003, ENGL 1013, ENGL 1023, and ENGL 2003) to include three hours of ENGL 3203 Poetry; three hours of ENGL 3213 Fiction; three hours of ENGL 2023 Creative Writing I; three hours of ENGL 3013 Creative Writing II; three hours of ENGL 4013 Poetry Workshop or ENGL 4023 Fiction Workshop; twelve hours of survey courses (taken from ENGL 2303, ENGL 2313, ENGL 2323, ENGL 2343, and ENGL 2353); three hours of ENGL 4303 Introduction to Shakespeare; and six additional hours chosen from ENGL courses numbered above 3000 and WLIT courses numbered above 2333.

English Eight-Semester Degree Program with a Concentration in Creative Writing
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours
J. William Fulbright College of Arts and Sciences

Spring Semester 1
3 ENGL 1023 Composition II
3-4 MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16-17 semester hours

Fall Semester 2
3 ‡ENGL from Group A below
3 ‡ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 Core from area g (if needed) or ‡Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
15 semester hours

Spring Semester 2
3 ‡ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 ‡ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 Core from area g (if needed) or ‡Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
15 semester hours

Fall Semester 3
3 ‡ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 ‡ENGL 2023 Creative Writing I
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 3
3 ‡ENGL from Group A below or Core from areas a, b, c, d or e (as needed)
3 ‡ENGL from Group B or C below
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡ENGL 3013 Creative Writing II
3 ‡ENGL from Group B or C below
3 ‡ENGL from Group B or C below
3 Core from areas a, b, c, d or e (as needed)
4 General Electives
16 semester hours

Spring Semester 4
3 ‡ENGL 4013 Poetry Workshop or ‡4023 Fiction Workshop
3 ‡ENGL from Group B or C below
3 ‡ENGL from Group B or C below
3 ‡Upper Level ARSC Course
3 General Elective
15 semester hours

124 Total Hours

Group A: Twelve hours chosen from the following:

Spring Semester 1
3 hours of ENGL 2303 Survey of English literature from Beginning through 17th Century
3 hours from either
ENGL 2313 Survey of English Literature from 1700 – 1900 or
ENGL 2323 Survey of Modern British, Irish, and Postcolonial Literature
3 hours from either
ENGL 2343 Survey of American Literature from the Colonial Period through Naturalism or
ENGL 2353 Survey of Modern American Literature
3 hours from one of remaining ENGL 2313 or ENGL 2323 or
ENGL 2343 or ENGL 2353
Group B: Nine hours of the following:
3 hours ENGL 3203 Poetry
3 hours ENGL 3213 Fiction
3 hours ENGL 4303 Introduction to Shakespeare
Group C:
Six additional hours chosen from English or World Literature courses numbered above 3000

‡ Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for Departmental Honors in English: The Departmental Honors Program in English allows upper-division undergraduates to strengthen their study of English and adapt it to their interests. Honors candidates enroll in special courses and directed independent study and research. In addition to the college and departmental requirements for the major in English and the general college requirements for the B.A. degree, each honors candidate in English must
1. be accepted as an honors candidate by the department,
2. complete at least nine hours of honors course work, at least three hours of which must be in English,
3. enroll in at least three hours of Senior Thesis ENGL 498V and write an honors thesis, either a critical study or a creative writing project, and
4. defend the candidate’s entire honors program in an oral examination. Candidates may petition to enroll in a departmental graduate seminar. Candidates who complete the honors program with merit will graduate with the distinction “English Scholar Cum Laude.” The distinctions of Magna Cum Laude and Summa Cum Laude will be awarded only for exceptional work and will be based on the candidate’s entire honors program.

Requirements for a Minor in English: 18 hours of English (not counting ENGL 0003, ENGL 1013, ENGL 1023, and ENGL 2003) to include any nine hours of survey courses (chosen from ENGL 2303, ENGL 2313, ENGL 2323, ENGL 2343, and ENGL 2353) and nine additional hours chosen from English courses numbered above 3000 and WLIT courses above 2333.

Requirements for a Combined Major in English and Journalism: The English requirements for this combined major are as follows:
24 hours of English courses (not counting ENGL 0003, ENGL 1013, ENGL 1023, and ENGL 2003) to include any nine hours of survey courses (chosen from ENGL 2303, ENGL 2313, ENGL 2323, ENGL 2343, and ENGL 2353) and 15 additional hours chosen from English courses numbered above 3000 and WLIT courses above 2333.

The Journalism requirement for the combined major is 24 semester hours including JOUR 1023, JOUR 1033, and JOUR 3633. The remaining 15 hours are filled from one of the two following options:
Combined Major in English and Journalism Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional BA Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-4 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 JOUR 1023 Media and Society or JOUR 1033 Fundamentals of Journalism
3 Core from areas a, b, c, d or e (as needed)
15-16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e
3 JOUR 1023 Media and Society or JOUR 1033 Fundamentals of Journalism (as needed)
4 Core from area f (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

Fall Semester 2
3 †ENGL from English survey courses above
3 †JOUR 2013 News Reporting I
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 2
3 †ENGL from English survey courses above
3 ††JOUR 3013 Editing or JOUR 3023 News Reporting 2
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Fall Semester 3
3 ††JOUR 3023 News Reporting 2 or ††JOUR 3013 Editing
3 †ENGL from English survey courses above
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 3
3 ††JOUR 3633 Media Law
3 ††ENGL/WLIT Upper Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Assessment Requirement: Every senior English major must take the program assessment exam administered by the department each spring semester to graduate. Exam results will not affect GPA, although the student’s score will be noted on his or her permanent academic record. This requirement may be waived in extraordinary circumstances by the department’s Director of Undergraduate Studies. Contact your adviser for more information.

English (B.A.) Teacher Licensure Requirements: Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students wanting to teach English in middle school should consult with a middle-level adviser in the College of Education and Health Professions.

SEE PAGE 349 FOR ENGLISH (ENGL) COURSES

EUROPEAN STUDIES (EUST)

Fiona Davidson
Director of Studies
108 Ozark Hall
479-575-3879

Web site: http://www.uark.edu/depts/eust/

• Professors Booker (English), Bukey (history), Dixon (geography), DuVal (English), Eichmann (French), Gay (economics), Hanlin (German), Hefferman (English), Kelley (political science), Kennedy (history), Montgomery (English), Pritchett (Spanish), Purvis (journalism and political science), Ricker (German), Tucker (Russian), Waligorski (political science),

• Associate Professors Adler (philosophy), Arenberg (French), Bailey (communication), Davidson (geography), Jacobs (art), Minar (philosophy), Scheide (communication), Senor (philosophy), Sonn (history)

• Assistant Professors Brogi (history), Condray (German), Rozier (Italian), Ruiz (Spanish)
Courses are offered in European studies, broadly defined as the study of the geography, culture, history, language, and politics of central Europe, including the British Isles.

Students wishing to maximize their knowledge of European studies and wishing to prepare for graduate training and/or employment in the private sector or government in positions related to the area may earn a combined major in European studies together with a major in another discipline. Students are required to coordinate their academic programs both with their advisers in the major department and with the director of the European Studies program. New students entering the program are required to notify both the major adviser and the director of studies of their intention to participate. Freshmen and sophomores considering this program are advised to begin their study of an appropriate foreign language as early as possible.

**Requirements for a Minor in European Studies:**
Students wishing to minor in European studies must fulfill the EUST 2013 Introduction to Europe and EUST 4003 Colloquium requirements and the language requirements described below under the requirements for the major. They also must complete at least 12 hours from among the electives listed below. A maximum of six hours of electives may be submitted from any one department.

**Requirements for a Major in European Studies – Language Requirement:** Students must complete the equivalent of a third year of a modern European language, e.g., six hours of advanced 3000- or 4000-level work in French, German, or Spanish. Less commonly taught languages such as Portuguese or Italian may be used, subject to the availability of courses. Three to six hours in an approved study abroad program in Europe may substitute for all or part of this requirement. For native speakers of a European language other than English, this requirement is waived.

**Introduction to Europe:** Students must complete EUST 2013 Introduction to Europe, preferably before taking the colloquium.

**European Studies Colloquium:** Students must complete three to six hours of EUST 4003 European Studies Colloquium.

**Electives:** Students must complete at least 18 hours of credit, in addition to the language requirement and the European studies colloquium, from among the following or in individualized studies under the direction of faculty participating in the program. Students choosing to take individualized reading or directed research courses as part of the major or minor must obtain the approval of the director of the area studies program and their major adviser. In addition, the following conditions apply:

1. A maximum of nine hours may be submitted from any one department, and
2. A maximum of six hours may be submitted from courses taken in the student’s major department.

The following courses may be taken in fulfillment of elective requirements:

**Anthropology**
ANTH 4253 People and Cultures of the World Regions (Region varies, counts for EUST if region is Europe)

**Art History**
ARHS 4873 Baroque Art
ARHS 4883 19th Century European Art
ARHS 4893 20th Century European Art

**English**
Any 3000- or 4000-level course in 18th, 19th, or 20th century British, Irish, Scots, or continental literature, any comparative literature course with significant European content.

**Foreign Languages**
Any 3000- or 4000-level French, German, Italian or peninsular Spanish literature or civilization course.

**Geography**
GEOG 4243 Political Geography

GEOG 4783 Geography of Europe
HIST 3443 Modern Imperialism
HIST 3533 World War II
HIST 4103 Europe in the 19th Century
HIST 4113 20th Century Europe to 1939
HIST 4133 Society and Gender in Modern Europe
HIST 4143 Intellectual History of Europe Since the Enlightenment
HIST 4183 Great Britain 1780-1914
HIST 4193 Great Britain 1901-1982
HIST 4213 The Era of the French Revolution
HIST 4223 France Since 1815
HIST 4243 Germany 1789-1918
HIST 4253 History of Germany 1918-1949

**Humanities**
HUMN 4913 Literary Reflections on the Holocaust

**Music History**
MUHS 3703 History of Music to 1800
MUHS 3713 History of Music from 1800 to Present
MUHS 4253 Special Topics in Music History (depending on topic)

**Philosophy**
PHIL 4033 Modern Phil – 17th and 18th Century
PHIL 4043 19th Century Philosophy
PHIL 4063 20th Century Continental Philosophy
PHIL 4073 History of Analytic Philosophy

**Political Science**
PLSC 3553 Western European Politics
PLSC 3963 Modern European Political Thought
PLSC 4543 Government and Politics of Eastern Europe
PLSC 4803 Foreign Policy Analysis

**Requirements for Honors in EUST:** The Honors Program in European Studies gives junior and senior students of high ability the opportunity to enroll in enriched courses and conduct independent research culminating in an honors thesis. In addition to satisfying the general Fulbright College requirements for graduation and the basic eligibility requirements for honors as established by the Honors Council, candidates for honors in European Studies must complete 12 hours of honors credit in partial satisfaction of requirements for the co-major. One to six of these may be thesis hours (EUST 4003H). The preferred method for satisfying the remaining hours is to enroll in the colloquium at least once for honors credit (EUST 4003H) and to take relevant honors colloquia or graduate courses (with permission) in one of the departments contributing to this interdisciplinary area study. The thesis committee shall include a representative from the major discipline (in the case of multiple majors, from the discipline contributing most significantly to the topic). Successful completion of these requirements will be recognized by the award of the distinction “European Studies Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in exceptional cases and are based upon the whole of the candidate’s program of honors studies.

SEE PAGE 352 FOR EUROPEAN STUDIES (EUST) COURSES

**FOREIGN LANGUAGES (FLAN)**
Kay Pritchett
Chair of Department
425 Kimpel Hall
479-575-2951
Web site: http://www.uark.edu/depts/flaninfo/

- Professors Eichmann, Hanlin, Haydar, Levine, Pritchett, Restrepo, Ricker, Tucker, Williams
- Professors Emeriti Falke, Fernandez
The foreign language requirement among the basic courses is satisfied by successful completion of a course numbered 2013 for all B.A. degree candidates and of a course numbered 2003 for all B.S. and B.F.A. degree candidates, and 1013 for B.M. degree candidates. Students who, on the basis of prior knowledge of language, omit one or more courses in the basic language sequence (1013-2013) may receive college credit for omitted courses if they validate their higher placement by passing an advanced course with a grade of “C” or above. Credit will be awarded at the request of the student when filed by application to the Foreign Language Department office.

Restrictions: (a) Conversation courses (3033, 4033) and correspondence courses may not be used to validate such prior knowledge, (b) No degree credit (graduation credit) is awarded for a foreign language 1003 course to students in Fulbright College continuing the language begun in high school, either by validation or regular registration. Also, for Fulbright College students who do not present the Fulbright College admission requirement of two units (years) of a single modern foreign or classical language, the first semester of language study will be considered remedial and will not count towards the 124 hours required for graduation (although the course will appear as University credit and the grade received will be computed in the grade-point average). Students transferring from other institutions are expected to meet the same entrance standard.

Requirements for a Major in a Foreign Language:

French: (University and college requirements for the Bachelor of Arts are found on pages 40 and 119.) 24 hours in French in courses numbered 3000 or above with a minimum grade of “C” in each course. Specific courses required are FREN 3113, FREN 4003, FREN 4033, FREN 4213, FREN 4223, and FREN 4233.

French Eight-Semester Degree Program

Students wishing to follow the eight semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or MATH 2043, 2053, 2183 or 2554
3 FREN course from Group A
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3-4 MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, d or e (as needed)
3 FREN course from Group A
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16-17 semester hours

Fall Semester 2
3 FREN course from Group A or FREN course from Group B
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 2
3 FREN course from Group A or FREN course from Group B
3 Core from area g (if required) or Advanced Level Elective
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
4 General Electives
15 semester hours

Fall Semester 3
3 FREN course from Group B
3 FREN course from Group B or FREN course from Group C
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
4 General Electives
16 semester hours

Spring Semester 3
3 FREN course from Group C
3 FREN course from Group C
3 Core from area g (if required) or Advanced Level Elective
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 FREN course from Group C (as needed)
3 FREN course from Group C (as needed)
3 Advanced Level Elective
3 General Elective
3 General Elective
15 semester hours

Spring Semester 4
3 FREN course from Group C (as needed) or General Elective
3 FREN course from Group C (as needed) or General Elective
3 Advanced Level Elective
3 Advanced Level Elective
3 General Elective
15 semester hours

124 Total Hours

Group A: Courses to complete the basic language requirement, as needed:
FREN 1003 Elementary French I
FREN 1013 Elementary French II
FREN 2003 Intermediate French I
FREN 2013 Intermediate French II
Group B: Minimum 9 hours
FREN 3113 Introduction to Literature
FREN 4003 Advanced Grammar
Three hours chosen from the following:
FREN 3003 Advanced French
FREN 3103 Cultural Readings
FREN 3033 Intermediate Conversation

University of Arkansas, Fayetteville
Group C: Minimum 15 hours
FREN 4033 Oral Proficiency
FREN 4213 French Civilization
FREN 4223 Survey of French Literature I
FREN 4233 Survey of French Literature II
Three hours chosen from the following:
FREN 4333 Business French
FREN 4113 Special Themes French Literature
FREN 475V Special Investigations
FREN 4203 Quebec Studies

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

German: (University and college requirements for the Bachelor of Arts are found on pages 40 and 119.) 24 hours in German in courses numbered 3000 or above with a minimum grade of “C” in each course. Specific courses required are GERM 3003, GERM 3013, GERM 4003, GERM 4213, GERM 4223, three hours of conversation (GERM 3033 or GERM 4033) and six hours of literature.

German Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-4 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 GERM course from Group A below
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
15-16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or Core from areas a, b, d or e (as needed)
3 GERM course from Group A below
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 Core from area g (if required) or †Advanced Level Elective
16 semester hours

Fall Semester 2
3 GERM course from Group A below or ††GERM course from Group B below
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 2
3 †Core from area g (if required) or †Advanced Level Elective
3 GERM course from Group A below or ††GERM course from Group B below

Group B
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
3 General Elective
15 semester hours

Fall Semester 3
3 ††GERM course from Group B below
3 ††GERM course from Group B below (if needed) or ††GERM course from Group C
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
3 Core from area g (if required) or †Advanced Level Elective
16 semester hours

Spring Semester 3
3 ††GERM course from Group B below
3 ††GERM course from Group B below (if needed) or ††GERM course from Group C
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
3 General Elective
15 semester hours

124 Total Hours

Group A: Courses to complete the basic language requirement, as needed.
GERM 1003 Elementary German I
GERM 1013 Elementary German II
GERM 2003 Intermediate German I
GERM 2013 Intermediate German II
Group B: Fifteen hours.
GERM 3003 Advanced German I (fall)
GERM 4003 Advanced German II (spring)
GERM 3013 Introduction to Literature (fall)
GERM 4213 German Civilization (spring)
GERM 3033 Conversation (spring)
Group C: Nine hours.
GERM 4003 Conversation
GERM 4143 German Lyric Poetry
GERM 4343 Business German II
GERM 4123 The German Novella
GERM 4223 German-Speaking Countries
GERM 470V Special Topics
GERM 4133 The German Drama
GERM 4333 Business German I
GERM 475V Special Investigations
Spanish:

(University and college requirements for the Bachelor of Arts are found on pages 40 and 119.) 27 hours in Spanish in courses numbered 3000 or above with a minimum grade of “C” in each course. Specific courses required are SPAN 3003, SPAN 3033, SPAN 3103, SPAN 3113, and SPAN 4003. The remaining 12 hours are to be selected from among other 4000-level offerings, in consultation with the major adviser. Students considering future graduate work in Spanish are strongly advised to take both the Spanish and Latin American literature surveys (SPAN 4103 and 4133).

Spanish Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 SPAN course from Group A
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, d or e (as needed)
3 SPAN course from Group A
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16-18 semester hours

Fall Semester 2
3 SPAN course from Group A or ‡‡Group B
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 2
3 †Core from area g (if needed) or †Advanced Level Elective
3 ‡‡SPAN course from Group B
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
3 General Elective
15 semester hours

Fall Semester 3
3 ‡‡SPAN course from Group B
3 ‡‡SPAN course from Group B
3 Core from areas a, b, d or e (as needed)
3 Core from areas a, b, d or e (as needed)
4 General Elective
16 semester hours

Spring Semester 3
3 ‡‡SPAN course from Group B
3 ‡‡SPAN course from Group B (if needed) or ‡‡Group C
3 ?Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡‡SPAN course from Group C (as needed)
3 ‡‡SPAN course from Group C (as needed)
3 †Advanced Level Elective
3 General Elective
3 General Elective
15 semester hours

Group A: Courses to complete the basic language requirement, as needed.
- SPAN 1013 Elementary Spanish II
- SPAN 2003 Intermediate Spanish I
- SPAN 2013 Intermediate Spanish II

Group B: Fifteen hours (3000-level courses must be completed before enrolling in SPAN 4003.)
- SPAN 3003 Advanced Spanish
- SPAN 3033 Intermediate Conversation
- SPAN 3013 Cultural Readings
- SPAN 3113 Introduction to Literature
- SPAN 4003 Advanced Grammar

Group C: Twelve hours required from the following:
- SPAN 4033 Advanced Conversation
- SPAN 4133 Survey of Spanish American Literature
- SPAN 4223 Latin American Civilization
- SPAN 4103 Monuments of Spanish Literature I
- SPAN 4113 Monuments of Spanish Literature II
- SPAN 4213 Spanish Civilization
- SPAN 4233 Modern Mexican Culture and Society
- SPAN 4243 Literature and Culture in Hispanic U.S.
- SPAN 4253 Latin American Cinema and Society
- SPAN 4333 Business Spanish I
- SPAN 4063 Spanish Linguistics
- SPAN 470V Special Topics
- SPAN 475V Special Investigations

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Writing Requirement: The college writing requirement may be satisfied by a term paper or other written work submitted for an upper-division foreign language literature class approved by the chair of the department.
For majors in Greek and Latin, see Classical Studies.

**Requirements for a Minor in Foreign Languages:**

**French:** 15 hours in courses numbered 3000 or above. Specific courses required are FREN 3113, FREN 4003, and FREN 4033.

**German:** 15 hours in courses numbered 3000 or above. Specific courses required are GERM 3003, GERM 4003, GERM 4213 and three hours of literature.

**Spanish:** 15 hours in courses numbered 3000 or above. Specific courses required are SPAN 3003, SPAN 3103, and SPAN 4003 with six additional hours selected in consultation with the Spanish adviser.

**Requirements for a Minor in Foreign Languages with a Business Orientation:**

**French:** Courses required are FREN 3003, FREN 3103, FREN 4003, FREN 4033, and FREN 4333.

**Spanish:** Courses required are SPAN 3003, SPAN 3033, SPAN 3103, SPAN 4003, and SPAN 4333. In some cases, specific course requirements may be adjusted to the individual needs of the candidate with the permission of the Spanish adviser.

**Japanese:** Courses required are JAPN 3003, JAPN 3013, JAPN 3033, and JAPN 4333. In addition to the above four courses, students must choose one of the following elective courses: JAPN 3983 or JAPN 4313.

In some cases, elective courses may be adjusted to the individual needs of the candidate with the permission of the Japanese adviser.

For information on advanced degrees in foreign languages, see the Graduate School Catalog.

**Requirements for Honors in Foreign Languages:** The Honors Program in Foreign Languages gives students of high ability the opportunity to conduct independent research culminating in an honors thesis. In addition to satisfying general graduation requirements and all requirements for honors separately established by the Honors Council, candidates for honors in Foreign Languages must:

1. complete 12 hours of honors credit. One to six of these may be honors thesis hours; the remaining hours should be taken in disciplines chosen in consultation with the adviser;
2. complete an honors thesis in the major field, and pass an oral examination on the thesis conducted by an honors committee, as evidence of substantial individual research skills;
3. demonstrate superior competence in language, culture, and literature by achieving a G.P.A. of 3.5 in all upper-division courses submitted for the major.

Successful completion of these requirements will be recognized by the award of the distinction “Language Scholar Cum Laude.” Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

**Foreign Language (B.A.)/Teacher Licensure Requirements:**

Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

SEE PAGE 354 FOR FOREIGN LANGUAGES (FLAN) COURSES. CHECK PAGE 309 FOR ALPHABETICAL LISTINGS OF SPECIFIC LANGUAGES.

**FULBRIGHT INSTITUTE OF INTERNATIONAL RELATIONS (FIIR)**

Donald R. Kelley  
Director of the Institute  
722 W. Maple  
479-575-2006  
Web site: http://www.uark.edu/~fiir/

The Fulbright Institute of International Relations is a center for study, research, and analysis of foreign policy and international affairs within the J. William Fulbright College of Arts and Sciences. The institute honors J. William Fulbright for his leadership in international relations and his lasting contributions to international education and better understanding among nations. In addition to instructional and research activities, the institute serves as a medium for international scholarly exchange and study programs, and sponsors conferences, seminars, public events, and publications on international relations.

**GENDER STUDIES (GNST)**

Susan Marren  
Chair of Studies  
333 Kimpel Hall  
479-575-4301  
Web site: http://cavern.uark.edu/depts/h2p/index.html

- Professors Schneider, Swedenburg
- Associate Professors Bailey, Coon, Detels, Fredrick, Gordon, Marren, Parry, Sonn, Stephens, Striffler, Zajicek
- Assistant Professors Amason, Cohen, Cornell (R.), D’Alisera, Erickson, House, Kahl, Robinson, Starks

The gender studies minor introduces students to various ways that questions about women’s and men’s differing participation in work, the family, political systems, and creative endeavors have been asked and answered by different academic disciplines. This is an interdisciplinary minor. Courses in the humanities and the social sciences explore sex roles, sex differences, and the concepts of masculinity and femininity, the roles of women in culture and society, past and present, and their implications for the roles of men, questions about the distribution of power, work, and resources in the public and private sectors, and the symbolic representation of gender and identity in literature, religion, and art. The minor is often chosen by students interested in investigating materials previously neglected by scholars and in fresh perspectives on traditional subject matter. Some expertise in gender studies has proven to be an asset to both female and male students who have gone on to a graduate school and to work in such fields as government and business, social services and health agencies, the law, art and politics.

**Requirements for a Minor in Gender Studies:** The student must complete 15 credit hours of regular courses listed below or special topics and seminars found in each semester’s schedule of classes under Gender Studies, including HUMN 2003 Introduction to Gender Studies:

- ANTH 3163 Male and Female  
- ANTH 3523 Gender and Politics in Latin America  
- CLST 4003H Rome on Film  
- COMM 3433 Family Communication  
- COMM 3983 Rhetoric of American Women  
- COMM 4333 Communication and Gender  
- HIST 3083 Women and Christianity  
- HIST 3923H Honors Colloquium: The History of Sexuality in the United States  
- HIST 3923H Honors Colloquium: Russian and Soviet Women  
- HIST 4133 Society and Gender in Modern Europe  
- HIST 4413 New Women in the Middle East  
- HUMN 2003 Intro. to Gender Studies  
- HUMN 3923H Honors Intro. to Gender Studies  
- HUMN 4243 Women in Music and Art  
- LAST 4003 Latina Writers  
- PLSC 4573 Gender and Politics  
- SOCI 4133 The Family  
- WLIT 3983 Women and Arabic Literature
GEOSCIENCES (GEOS)

Pamela Jansma
Chair of the Department
113 Ozark Hall
479-575-3355
Web site: http://www.uark.edu/depts/geology/
E-mail: geos@uark.edu

• Distinguished Professor Stahle
• Professors Brahana, Dixon, Guccione, Hehr,
  Jansma, Konig, Manger, Mattioli, Paradise, Stahle, Steele, Zachry
• Associate Professors Boss, Davidson, Davis, Graff
• Assistant Professors Cothren, Tullis
• Adjunct Associate Professor Hays
• Research Assistant Professor Nelson

Earth Science (ERSC)

Fulbright College offers a major in earth science leading to the Bachelor of Science degree. Prospective secondary teachers may plan a program, in cooperation with the College of Education, which will satisfy the teacher licensure requirements. Students interested in environmental problems, teaching earth science in public schools, or wishing to pursue graduate work in either geography or geology will obtain much of the necessary foundation through this degree. Because the program outlined below lists only minimum science requirements, it is expected that most students will use some of their elective credit hours to strengthen their science backgrounds in areas other than geography and geology. These areas of additional study will be determined through consultation between the student and the adviser. Students interested in this major should contact either Professor R.H. Konig or Professor J.C. Dixon.

Requirements for the B.S. Degree with a Major in Earth Science:

<table>
<thead>
<tr>
<th>Basic Courses</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry or Physics</td>
<td>8</td>
</tr>
<tr>
<td>GEOL 1113/1111L</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 1133/1131L</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Courses</td>
<td></td>
</tr>
<tr>
<td>ASTR 2003, ASTR 2001L</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 3003, GEOG 4353, GEOG 4363</td>
<td>9</td>
</tr>
<tr>
<td>GEOL 2313, GEOL 3114, GEOL 3313, GEOL 3413</td>
<td>13</td>
</tr>
<tr>
<td>At least 6 additional hours, at the 3000 level or above, in either geography or geology.</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>56</strong></td>
</tr>
</tbody>
</table>

In addition, all earth science majors must satisfy the senior-level writing requirement as specified by the geosciences department.

Earth Science Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

3 ENGL 1013 Composition I

3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
4 GEOL 1113/1111L General Geology
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

**Spring Semester 1**

3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183, 2554 (if needed) or Core from areas a, b, c, d or e (as needed)
4 GEOL 1133/1131L Environmental Geology
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16-17 semester hours

**Fall Semester 2**

3 †GEOL 2313 Mineralogy
4 CHEM or PHYS Course (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

**Spring Semester 2**

3 †Core from area f (if needed) or Advanced Level Elective
4 ASTR 2003/2001L
4 CHEM or PHYS Course (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †GEOG 3003 Conservation of Natural resources
17 semester hours

**Fall Semester 3**

4 BIOL Course (as needed)
3 †GEOL 3413 Sedimentary Rocks
3 Core from areas a, b, c, d or e (as needed)
3 †Core from area f (if still needed) or Advanced Level Elective
3 †Advanced Level Elective
16 semester hours

**Spring Semester 3**

4 BIOL Course (as needed)
4 †GEOL 3114 Invertebrate Paleontology
3 Core from areas a, b, c, d or e (as needed)
3 †GEOG 3003 Conservation of Natural resources
14 semester hours

**Fall Semester 4**

3 †GEOG 4363 Climatology
3 †Upper Level GEOG or GEOL Course
15 semester hours

**Spring Semester 4**

3 †GEOL 4353 Elements of Weather
3 †GEOL 3313 Igneous and Metamorphic Rocks
3 General Elective
3 General Elective
3 †Advanced Level Elective
15 semester hours

124 Total Hours
Earth Science (B.S.) Teacher Licensure in Life/Earth Science or Physical/Earth Science Requirements:
Students wanting to teach science in middle or secondary school should consult with an adviser in the College of Education and Health Professions.

Requirements for a Major in Geography:
The geography major of 30 hours leads to the B.A. degree in Fulbright College of Arts and Sciences. Requirements include GEOG 1123, GEOG 2103, GEOG 2203, GEOL 1131L, and GEOL 1133. A minimum of 15 hours must be at the 3000 level or above, including GEOG 3023, with a balance between regional and topical courses. The college writing requirement is to be met by completion of a term paper deemed satisfactory by the student's adviser and instructor of an upper-level geography course. The college writing requirement may also be met by the completion of an honors thesis. Students who expect to enter graduate school are encouraged to register for GEOG 410V their senior year. Electives in closely related fields are considered a part of the program and, upon prior approval of the department, six hours may be counted toward the major. Those planning to teach in secondary schools should note that they can both earn their degree in geography and qualify for a teaching certificate; they should consult with the department as early as possible.

Geography Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area. The course GEOG 2103 Emerging Nations counts as three hours toward University Core area e.

Fall Semester 1
3 GEOG 1123 Human Geography
3 ENGL 1013 Composition I
3 MATH 1203 College Algebra or †MATH 2043, 2053, 2183 or 2554
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 1
4 GEOL 1113/1111L General Geology
3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183 or 2554 or Core from groups a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16-17 semester hours

Fall Semester 2
3 GEOG 2103 Emerging Nations
4 GEOG 1133/1131L Environmental Geology/Lab
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

Spring Semester 2
3 GEOG 2203 Developed Nations
3 +Core from area g (if needed) or †Advanced Level Elective
4 Core from group f (from Biological Sciences)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

Fall Semester 3
3 ††GEOG 3023 Introduction to Cartography
3 ††GEOG 3000-level or above Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
1 General Elective
16 semester hours

Spring Semester 3
3 ††GEOG 3000-level or above Elective
3 ††GEOG 3000-level or above Elective
3 +Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Fall Semester 4
3 ††GEOG 3000-level or above Elective
3 ††Upper Level Elective with Departmental Consent
3 †Advanced Level Elective
3 General Elective
3 General Elective
15 semester hours

Spring Semester 4
3 ††Upper Level Elective with Departmental Consent
3 ††Upper Level ARSC Elective
3 †Advanced Level Elective
3 †Advanced Level Elective
3 General Elective
15 semester hours

124 Total Hours
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter.
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Minor in Geography: 15 hours in geography to include GEOG 1123. At least 6 hours must be numbered 3000 or above and must include one regional and one topical course.

Requirements for a Minor in Historic Preservation: 18 hours
from each of the following:

a. ARCH 1003, or both ARCH 1212 and 1222, or equivalent class in architecture
b. GEOG 4063, or LARC 3413, or equivalent class in urban studies
c. ANTH 4443, or equivalent class in cultural resources
d. GEOL 1133, or equivalent class in the human and physical aspects of the Earth
e. GEOG 3023 or equivalent class in spatial representation and visualization
f. GEOG 3033

GEOG 3033 Building Materials Field Studies and Laboratory is the required field and laboratory-based capstone course that will require two weekends (Saturday and Sunday) for completion. The course has been specifically designed for this program and will discuss the nature of building materials (wood, brick, mortar and stone), their identification and properties, weathering and erosion theory, assessment and mitigation (i.e. cleaning, consolidants, innovative trends). It is suggested that this class be taken last in the program series.

One semester participation in the University of Arkansas’ Rome Program will substitute for six (6) credits from class sections “a” (Architectural History) and “b” (Urban Studies) listed above. A supplemental program internship is suggested in addition to the classes required if the student’s career path is in Historic Preservation.

Cartography/Remote Sensing GIS Specialization: This program gives students an opportunity to develop expertise in (1) cartography, map design and computer-assisted map production, (2) remote sensing and image interpretation, including photographic systems, sensor systems, and digital image processing, and (3) geographic information systems, including data sources, analytical techniques, and hardware/software systems.

To complete the specialization, a student is required to fulfill certain course requirements.

Required courses (9 hours):
- GEOG 3023, GEOG 4413, and GEOG 4543 (same as ANTH 4543).

Elective courses (9 hours to be selected from the following):
- GEOG 4523, GEOG 45423, GEOG 4553 (same as ANTH 4553),
- GEOG 4563 (same as ANTH 4563), GEOG 4573 (same as ANTH 4573), GEOG 4593 (same as ANTH 4593), STAT 4003 (or other approved statistics course)
- CVEG 2053 (or other approved surveying course)
- CENG 4883

Requirements for Departmental Honors in Geography:
Admission to the Departmental Honors Program in Geography is open to geography majors with a minimum grade-point average of 3.25 in all their work. All honors candidates must take 12 hours, which may include 6 hours of thesis, in Honors Studies. During the fall semester of either the junior or senior year the candidate will enroll in GEOG 399VH (no more than three hours of credit), an undergraduate seminar in geographical philosophy and methodology. During the senior year the honors candidate will complete the program by writing a senior honors paper under GEOG 399VH (no more than three hours of credit). Successful completion of the requirements will be recognized by the award of the distinction “Geography Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

Geography (B.A.) Social Studies Teacher Licensure:
Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students wanting to teach social studies in middle school should consult with a middle level adviser in the College of Education and Health Professions.

SEE PAGE 355 FOR GEOGRAPHY (GEOG) COURSES
## Requirements for a Major in Geology leading to the B.A. Degree:

**GEOL 1113/1111L (or 3002), GEOL 2313, GEOL 3313, GEOL 3413, GEOL 3514, GEOL 4223, GEOL 4643, and one additional upper-level geology course. Also, each student must complete CHEM 1123/1121L, MATH 2043, and a 3-hour, upper-level science course approved by the student’s adviser. All semester hours presented to fulfill the natural science requirements for the B.A. program must be taken in areas other than geology.**

### Geology B.A. Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

### Fall Semester 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1013 Composition I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 1203 (If required) or †‡MATH 2043</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>GEOL 1113/111L General Geology or †‡GEOL 3002 Geology for Engineers and lab</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>General Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>16-17 semester hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Spring Semester 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>†‡GEOL 2313 Mineralogy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHEM 1103/1101L University Chemistry I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>14-16 semester hours</td>
<td></td>
<td></td>
</tr>
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</table>

### Fall Semester 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>†‡GEOL 3313 Igneous/Metamorphic Petrology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHEM 1123/1121 University Chemistry II</td>
<td>4</td>
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</tr>
<tr>
<td>Core from area g (if needed) or †Advanced Level Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>16 semester hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Spring Semester 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>†‡GEOL 3413 Sedimentary Rocks</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>†‡GEOL 3514 Structural Geology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Core from area g (if needed) or †Advanced Level Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
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<td>16 semester hours</td>
<td></td>
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</table>

### Fall Semester 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>†‡GEOL 3413 Sedimentary Rocks</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>†‡GEOL 3514 Structural Geology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Core from area g (if needed) or †Advanced Level Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Core from areas a, b, c, d or e (as needed)</td>
<td>3</td>
<td></td>
</tr>
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<td>16 semester hours</td>
<td></td>
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</tbody>
</table>

### Spring Semester 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>†‡GEOL 4223 Stratigraphy and Sedimentation and lab</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>†‡Upper Level GEOL Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>124 Total Hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Group A: Six hours from the following:

- GEOL 4033 Hydrogeology
- GEOL 4043 Water Resource Issues
- GEOL 4053 Geomorphology
- GEOL 4153 Karst Hydrogeology
- GEOL 4253 Petroleum Geology
- GEOL 4413 Principles of Remote Sensing
- GEOL 4433 Geophysics

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Fall Semester 4
4 ‡‡GEOL 4643/4641L Historical Geology
4 ‡‡Upper Level Science Course (Approved by Adviser)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
3 General Elective
17 semester hours

Spring Semester 4
3 ‡Advanced Level Elective
3 ‡Advanced Level Elective
3 ‡Advanced Level Elective
3 General Elective
3 Elective
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Writing Requirement: A scholarly writing assignment will be included in all geology courses numbered 2000 and above. Those papers submitted in geology courses 3000 and above will fulfill the Fulbright College writing requirement.

Requirements for a Minor in Geology: A minor in geology shall be awarded upon completion of the following course work: GEOL 1113/1111L (or 3002), GEOL 1133/1131L, GEOL 2313, two courses at the 3000-level, and one course at the 4000 level. Students are advised to consult with a geology faculty member to develop the course work program that best complements their major area of study.

Requirements for Departmental Honors in Geology: The Departmental Honors Program in Geology provides upper-division undergraduate students with an opportunity to formally participate in geologic research activities. Honors candidates carry out independent study and research under the guidance of the geology faculty. Outstanding student achievement will be recognized by awarding the distinction “Geology Scholar Cum Laude” at graduation. Higher degree distinctions may be awarded to truly outstanding students based upon the whole of their academic program and quality of honors research.

Honors candidates in geology must do the following:
1. Satisfy departmental and college requirements for a bachelor’s degree with honors,
2. Become a candidate no later than the second semester of their junior year,
3. Enroll in six hours of honors research GEOL 3901, GEOL 3911, GEOL 4922, GEOL 4932,
4. Take 12 hours in Honors Studies, which may include 6 hours of thesis,
5. Complete junior and senior honors courses GEOL 3901, GEOL 3911, GEOL 4922, GEOL 4932, and
6. Achieve a cumulative grade-point average of 3.30 in geology courses.

Geology (B.A. or B.S.) Teacher Licensure in Life/Earth Science or Physical/Earth Science Requirements:
Students wanting to teach science in middle or secondary school should consult with an adviser in the College of Education and Health Professions.

For requirements for the M.S. degree in geology, see the Graduate School Catalog.

SEE PAGE 356 FOR GEOLOGY (GEOL) COURSES

HISTORY (HIST)

Jeannie Whayne
Chair of the Department
416 Old Main
479-575-3001
Web site: http://www.uark.edu/depts/histinfo/history/

• Distinguished Professors West, Woods
• Alumni Distinguished Professor Emeritus Gatewood
• Professors Bukey, Chappell, Engels, Kennedy, Sutherland, Tsai, Whayne
• Professors Emeriti Brown, Chase, Sloan (D), Vizzier
• Associate Professors Coon, Finlay, Gordon, Robinson, Sonn, Tucker
• Associate Professor Emeritus Edwards
• Assistant Professors Brogi, Schweiger, Sloan (K), Starks, Williams

Requirements for a Major in History: 36 semester hours to include WCIV 1003 and WCIV 1013 or HIST 1113 and HIST 1123 (or HIST 113H and 1123H) and HIST 2003 and HIST 2013, as well as 24 hours in history courses numbered 3000 or above, at least 12 hours of which must be 4000 or above.

Students must select 3 hours from each of the following groups:

Group 1: Europe, including Britain and Russia
HIST 3003, HIST 3063, HIST 3443,
HIST 3533, HIST 4003, HIST 4013,
HIST 4023, HIST 4043, HIST 4053,
HIST 4073, HIST 4083, HIST 4103,
HIST 4113, HIST 4133, HIST 4143,
HIST 4163, HIST 4183, HIST 4193,
HIST 4213, HIST 4223, HIST 4243,
HIST 4253, HIST 4283, HIST 4293

Group 2: Africa, Asia, Latin America, Near East, Russia
HIST 3033, HIST 3043, HIST 3203,
HIST 3213, HIST 3233, HIST 3473,
HIST 4283, HIST 4293, HIST 4313,
HIST 4353, HIST 4373, HIST 4383,
HIST 4393, HIST 4413, HIST 4433,
HIST 4823

Group 3: United States
HIST 3263, HIST 3323, HIST 3383,
HIST 3583, HIST 3593, HIST 4423,
HIST 4463, HIST 4763, HIST 4503,
HIST 4513, HIST 4533, HIST 4543,
HIST 4563, HIST 4573, HIST 4613,
HIST 4623, HIST 4643, HIST 4653,
HIST 4663, HIST 4673, HIST 4703,
HIST 4723, HIST 4733.

Russia may be counted for only one area. In consultation with an adviser, students who are history majors are encouraged to design a program of study with both breadth and depth.

Writing Requirement: To fulfill the Fulbright College writing requirement, each history major will submit, prior to graduation, a substantial research or analytical paper, with a grade of ‘A’ or ‘B’ from an upper-division history course (3000, 4000, 5000 level) to his or her departmental adviser. Satisfactory completion of an honors project or a senior thesis may fulfill this requirement.

University of Arkansas, Fayetteville
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Requirements for Departmental Honors in History: Admission to the Departmental Honors Program in History is open to history majors with a minimum grade-point average of 3.25 in all their work. Prospective Departmental Honors students must take 12 hours in Honors Studies, of which 6 hours must include HIST 3973H Honors Methods (Spring semester, junior year and HIST 399VH, Honors History Thesis, Fall or Spring semester, senior year). During the senior year, the honors candidate will complete the program by writing a senior honors thesis. Successful completion of the program will be recognized by the award of the distinction “History Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

History Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirements may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

| Fall Semester 1 | 3 ENGL 1013 Composition I  
|                 | 3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554  
|                 | 3 HIST 2003 History of the American People to 1877 or WCIV 1003 Institutions and ideas of Western Civilization I  
|                 | 3 Core from areas a, c, d or e (as needed)  
|                 | 3 Core from areas a, c, d or e (as needed)  
|                 | 15 semester hours  
| Spring Semester 1 | 3 ENGL 1023 Composition II  
|                  | 3-4 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, c, d or e (as needed)  
|                  | 3 HIST 2013 History of the American People, 1877 to Present or WCIV 1013 Institutions and ideas of Western Civilization II  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 4 Core from area f (as needed)  
|                  | 16-17 semester hours  
| Fall Semester 2 | 3 WCIV 1003 Institutions and ideas of Western Civilization I or HIST 2003 History of the American People to 1877 (if not taken earlier)  
|                 | 3 Core from areas a, c, d or e (as needed)  
|                 | 3 Core from areas a, c, d or e (as needed)  
|                 | 3 Core from area f (as needed)  
|                 | 16 semester hours  
| Spring Semester 2 | 3 WCIV 1013 Institutions and ideas of Western Civilization II or HIST 2013 History of the American People, 1877 to Present (if not taken earlier)  
|                  | 3 †Core from area g (if required) or †Advanced Level Elective  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 3 General Elective  
|                  | 15 semester hours  
| Fall Semester 3 | 3 ††HIST 3000 or 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 ††HIST 3000 or 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 4 General Electives  
|                  | 16 semester hours  
| Spring Semester 3 | 3 ††HIST 3000 or 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 ††HIST 3000 or 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 Core from area g (if still needed) or †Advanced Level Elective  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 4 Core from area f (as needed)  
|                  | 16 semester hours  
| Fall Semester 4 | 3 ††HIST 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 ††HIST 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 Core from areas a, c, d or e (as needed)  
|                  | 3 †Advanced Level Elective  
|                  | 3 General Elective  
|                  | 15 semester hours  
| Spring Semester 4 | 3 ††HIST 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 ††HIST 4000 level (from Group 1, 2, or 3 as needed)  
|                  | 3 †Advanced Level Elective  
|                  | 3 †Advanced Level Elective  
|                  | 3 General Elective  
|                  | 15 semester hours  

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Minor in History: 15 semester hours not to include WCIV 1003 and WCIV 1013. A student must notify the department of his or her intent to minor.

For the combined major in history and African-American studies, see page 124.

For freshman history, see Western civilization 1003, 1013.

History (B.A.) Social Studies Teacher Licensure Requirements:

Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students wanting to teach social studies in middle school should consult with a middle-level adviser in the College of Education and Health Professions.

For requirements for advanced degrees in history, see the Graduate School Catalog.

For information regarding departmental scholarships, visit the Web at http://www.uark.edu/depts/histinfo/history/sch.html.

SEE PAGE 361 FOR HISTORY (HIST) COURSES

HONORS STUDIES

Sidney Burris  
Director of Honors Studies  
517 Old Main
See page 122 for Fulbright College honors information and requirements.

**HUMANITIES (HUMN)**

David Fredrick  
Chair of Studies  
506 Old Main  
479-575-6776  
Web site: http://cavern.uark.edu/depts/h2p/index.html

- Distinguished Professor West  
- Professors Burris, Cochran, Cory, Goodstein, Kennedy, Quinn  
- Adjunct Professor Vitali  
- Associate Professors Adams, Coon, Davidson, Detels, Fredrick, Gordon, Jacobs, McCray, Robinson, Scheide, Sloan, Stephens  
- Assistant Professors Halman, Sexton  
- Adjunct Assistant Professor Del Gesso

The Humanities Program supports interdisciplinary coursework in Gender Studies, Medieval and Renaissance Studies, Honors World Cultures, and Arts and Aesthetics. Humanities also sponsors courses in Classics, Medieval, and Renaissance cultures taught every other summer and every fall semester at the Rome Study Center.

**INTERNATIONAL RELATIONS (IREL)**

Hoyt H. Purvis  
Chair of Studies  
116 Kimpel Hall  
479-575-3601  
Web site: http://www.uark.edu/~arsc/IR

The J. William Fulbright College of Arts and Sciences is strongly committed to the study of international relations and this program offers students a strong foundation for more advanced study as well as preparation for careers in an increasingly global economy and society. The degree offers a broad interdisciplinary course of study with a strong intercultural and international focus. Intensive language study and study abroad are especially encouraged.

**Requirements for a Major in International Relations:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIIR 2813 Intro. to International Relations</td>
<td>3</td>
</tr>
<tr>
<td>(same as PLSC 2813)</td>
<td></td>
</tr>
<tr>
<td>Six hours of upper-division foreign language courses or equivalent. (May be satisfied with approved study abroad courses related to language field. If upper-division language courses or unavailable in field of study, (appropriate courses will be approved as substitutes.)</td>
<td>6</td>
</tr>
<tr>
<td>ECON 2013 Principles of Macroeconomics and ECON 2023 Principles of Microeconomics, or ECON 2143 Basic Economics and one upper-level international economics course: ECON 4633 International Trade Policy, or ECON 4643 International Macroeconomics &amp; Finance</td>
<td>6-9</td>
</tr>
<tr>
<td>From the following (depending on ECON option selected): (Courses must be selected from at least two departments.)</td>
<td></td>
</tr>
</tbody>
</table>

**Area Studies Concentration**

Three hours of an Area Studies Colloquium (AIST, EUST, LAST, MEST, or RSST 4003) and approved area studies courses from GEOG, HIST, or PLSC.  
(A second Area Studies Colloquium may be taken with advanced approval.)

3

**FIIR (IREL) 4003 International Relations Seminar**

(Credits in study-abroad courses on an international topic or an honors colloquium on an international topic may be applied toward the major if approved in advance. Such courses may not be substituted for FIIR/PLSC 2813, the ECON requirement, or FIIR 4003.)

9

**International Relations Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional BA Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1013 Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554</td>
<td></td>
</tr>
<tr>
<td>PLSC 2003 American Nat’l. Government (meets requirement in core area b)</td>
<td></td>
</tr>
<tr>
<td>Foreign Language (as needed)</td>
<td>3</td>
</tr>
<tr>
<td>FIIR 2813 Intro. to International Relations or Core from areas a or d (as needed)</td>
<td>15</td>
</tr>
</tbody>
</table>

15 semester hours

**Spring Semester 1**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1023 Composition II</td>
<td>3</td>
</tr>
<tr>
<td>†MATH 2043, 2053, 2183 or Core from areas a or d (as needed)</td>
<td></td>
</tr>
<tr>
<td>FIIR 2813 Intro. to International Relations or Core from areas a or d (as needed)</td>
<td>4</td>
</tr>
<tr>
<td>Core from area f (as needed)</td>
<td></td>
</tr>
<tr>
<td>Core from area f (as needed)</td>
<td>16</td>
</tr>
</tbody>
</table>

16 semester hours
Fall Semester 2
3 ECON 2143 Basic Economics or †ECON 2013 Principles of Macroeconomics
3 Foreign Language (as needed)
3 WCIV 1003 Western Civilization I
3 Core from areas a or d (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 2
3 †Core area g (if required) or GEOG 2103 Emerging Nations or GEOG 2203 Dev. Nations
3 Foreign Language (as needed)
3 WCIV 1013 Western Civilization II
3 †ECON 2023 Microeconomics (if ECON 2013 completed in fall 2) or ††IREL Course from list above
4 Core from area f (as needed)
16 semester hours

Fall Semester 3
3 ††Upper Level Foreign Language
3 ††ECON 4633 International Trade Policy or ECON 4643 International Macroeconomics & Fin.
3 GEOG 2103 or GEOG 2203 (if needed) or ††IREL Course from list above
3 ††Area Studies Course above
3 Core from area a or d (as needed)
15 semester hours

Spring Semester 3
3 ††Upper Level Foreign Language
3 Core from area a or d (as needed)
3 Core from area a or d (as needed)
3 Core from area a or d (as needed)
3 ††Area Studies Colloquium above or Minor Requirement Course below
15 semester hours

Fall Semester 4
3 ††FIIR 4003 International Relations Seminar (Completes Senior Writing Requirement)
3 ††Area Studies Colloquium (if needed) or Other Area Studies Course above
3 ††IREL Course from list above
3 Minor Requirement Course below
3 Minor Requirement Course below
1 Elective
16 semester hours

Spring Semester 4
3 ††IREL Course from list above or Minor Requirement Course below (as needed)
3 ††Area Studies Course above or Minor Requirement Course below (as needed)
3 Minor Requirement Course below (as needed)
3 Minor Requirement Course below (as needed)
3 Core from areas a or d (as needed)
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Disciplinary or Area Studies Minor
Students must complete a minor (15-18 hours) in one of these disciplines, consisting of approved international-related courses:
   Anthropology (15)
   Economics (18)
   Geography (15)
   History (15)
   Political Science (18)
   Asian Studies (15)
   European Studies (15)
   Latin American Studies (15 and language requirements)
   Middle East Studies (18)
   Russian Studies (18)

Approved Courses for Minor in Anthropology for International Relations majors:
   ANTH 3003 World Prehistory
   ANTH 3033 Egyptology
   ANTH 3123 Anthropology of Religion
   ANTH 3503 Power and Popular Protest in Latin America
   ANTH 3523 Gender and Politics in Latin America
   ANTH 3923H Honors Colloquium (for honors students if the topic is international-related)
   ANTH 4123 Ancient Middle East
   ANTH 4163 Globalization: Crisis, Conflict and Capitalist Development
   ANTH 4253 Peoples and Cultures of World Regions
   ANTH 4513 African Religions: Gods, Witches, Ancestors
   ANTH 4533 Middle East Culture
   ANTH 4583 Peoples and Cultures of Sub-Saharan Africa

Approved Courses for Minor in Economics for International Relations majors:
   ECON 2013 Principles of Macroeconomics
   and ECON 2023 Principles of Microeconomics
   or ECON 2143* Basic Economics
   ECON 3033 Microeconomic Theory
   ECON 3133 Macroeconomic Theory
   ECON 4633 International Trade Policy
   ECON 4643 International Macroeconomics & Finance
*Students who take ECON 2143 will be required to take an additional upper division economics course to complete the minor.

Approved Courses for Minor in Geography for International Relations majors:
   GEOG 2023 Economic Geography
   GEOG 2103 Emerging Nations
   GEOG 2103H Honors Emerging Nations
   GEOG 2203 Developed Nations
   GEOG 3353 Economic Geography of NAFTA
   GEOG 3923H Honors Colloquium (for honors students if the topic is international-related)
   GEOG 4033 Geography of the Middle East
   GEOG 4243 Political Geography
   GEOG 4723 Australia and the Pacific Islands
   GEOG 4783 Geography of Europe
   GEOG 4793 Geographic Concepts for Global Studies

Approved courses for minor in History for International Relations majors:
   HIST 1113 Institutions and Ideas of World Civilization
   HIST 1113H Honors World Civilization
   HIST 1123 Institutions and Ideas of World Civilization
   HIST 1123H Honors World Civilization
   HIST 3003 History of Christianity
Approved Courses for Minor in Political Science:

- 18 hours including PLSC 2003 or PLSC 2013. At least nine of these hours must be in courses numbered 3000 or above, and courses must be chosen from at least two of the five political science fields.
- PLSC 2813 Intro. to International Relations
- PLSC 3503 Government and Politics of East Asia
- PLSC 3523 Government and Politics of the Middle East
- PLSC 3533 Political Development
- PLSC 3553 Western European Politics
- PLSC 3573 Government and Politics of Latin America
- PLSC 3803 International Organization
- PLSC 3813 International Law
- PLSC 3823 Theories of International Relations
- PLSC 3853 American Foreign Policy
- PLSC 4503 African Politics
- PLSC 4513 Creating Democracies
- PLSC 4543 Government and Politics of Eastern Europe
- PLSC 4563 Government and Politics of Russia

Approved Courses for Minor in Russian Studies:

- Students must complete 12 hours from approved Russian Studies courses listed in the catalog.

Approved Courses for Minor in Middle East Studies:

- Students must fulfill the Colloquium (LAST 4003) and language requirements for Middle East Studies minors described in the catalog and must complete 12 hours from the list of approved Middle East Studies courses listed in the catalog.

Approved Courses for Minor in Latin American Studies:

- Students must fulfill the Colloquium (LAST 4003) and language requirements for Latin American Studies minors described in the catalog and must complete 12 hours from the list of approved Latin American studies courses listed in the catalog.

Approved Courses for Minor in European Studies:

- Students must fulfill the Colloquium (EUST 4003) and language requirements for European Studies minors described in the catalog and must complete 12 hours from the list of approved European Studies courses in the catalog, including at least three hours in EUST 4003 European Studies Colloquium.

Approved Courses for Minor in Asian Studies:

- Students must complete 15 credit hours of courses from the list of approved Asian Studies courses in the catalog, including at least three hours in AIST 4003 Asian Studies Colloquium.

Writing Requirement: Students may meet the college writing requirement by producing a satisfactory honors thesis, or research/analytical paper. The research/analytical paper may be written in any journalism option, the advertising/public relations option, or broadcast option. A minimum of 84-85 hours in non-journalism courses must be applied toward the 124 hours required by the college for a Bachelor of Arts degree.

The purpose of the Walter J. Lemke Department of Journalism is to provide students with knowledge of the history, theory, and ethics of mass communications, to educate students in journalistic skills, including the ability to express themselves logically and clearly, and to guide them in securing specialized knowledge of society appropriate to journalistic careers.

Journalism majors must fulfill the requirements for either the news/editorial option, the advertising/public relations option, or the broadcast option. A minimum of 84-85 hours in non-journalism courses must be applied toward the 124 hours required by the college for a Bachelor of Arts degree.

Resources:
- J. William Fulbright College of Arts and Sciences
- University of Arkansas, Fayetteville

Web site: http://uark.edu/journalism
- Professors Foley, Purvis
- Professors Emeriti Ingenthron, Reed
- Associate Professors Carpenter, Jordan, Miller, Montgomery, Stockdell, Watkins, Wicks
- Assistant Professor Fosu
- Instructors Martin, Shurlds
- Instructor Emerita Belzung
course numbered JOUR 3133 or higher or by registering for JOUR 498V. Rules governing the research/analytical paper may be obtained from the journalism department or from any journalism professor.

**Requirements for a B.A. degree in Journalism:** A minimum of 33 semester hours in journalism, including JOUR 1023, JOUR 1033, and JOUR 3633. Note that a minimum grade of ‘C’ is required in all journalism courses that serve as prerequisites for advanced journalism courses. In certain courses a minimum grade of ‘B’ is required. Also required is ENGL 2013. Students must select a sequence when they enter the department. Specific courses in addition to the journalism courses are required only for the advertising/public relations sequence. The requirements for each sequence are as follows:

**News/Editorial:** JOUR 2013, JOUR 3013, JOUR 3123, and either JOUR 3023 or JOUR 4553 are required, plus any four additional journalism courses for which the student has prerequisites. It is recommended that one course choice be an internship.

**Broadcast:** JOUR 2032/2031L, JOUR 3072/3071L, JOUR 4883/4880L, and JOUR 4873 are required, plus any four additional journalism courses for which the student has prerequisites. It is recommended that one course choice be an internship and another choice be JOUR 4883/4880L.

**Advertising/Public Relations:** JOUR 3723, JOUR 3743, JOUR 4143, JOUR 4423, and JOUR 4453 are required, plus any three additional journalism courses for which the student has prerequisites. It is recommended that one course choice be an internship. Also required are ECON 2143, MKTG 3433, and MKTG 4553. Students seeking admission to the Ad/PR Sequence must have an overall GPA of 2.25 or higher: 1) to be admitted to the Ad/PR Sequence, and 2) to enroll in JOUR 3723 and JOUR 3743. Ad/PR Sequence students are required to earn a grade of ‘B’ or higher in both JOUR 3723 and JOUR 3743 to qualify to take all upper level Ad/PR sequence courses. Students may retake JOUR 3723 and JOUR 3743 only once to earn a grade of “B” or higher.

**Journalism Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The journalism major includes three sequences: News/Editorial, Broadcast, and Advertising/Public Relations. The eight-semester degree plan for the Advertising/Public Relations sequence is shown below. Eight-semester plans for the News/Editorial and Broadcast sequences are available in Section 2 of the Catalog of Studies at [http://catalogofstudies.uark.edu/](http://catalogofstudies.uark.edu/).

The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

3 ENGL 1013 Composition I
3 MATH 1023 (If required) or †MATH 2043, 2053, 2183 or 2554
3 JOUR 1023 Media and Society or JOUR 1033 Fundamentals of Journalism
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

**Spring Semester 1**

3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed)
3 JOUR 1023 Media and Society or JOUR 1033 Fundamentals of Journalism (as needed)
4 Core from area f (as needed)
3 ECON 2143 Basic Economics or Core from areas a, b, c, d or e (as needed)
16-17 semester hours

**Fall Semester 2**

3 ECON 2143 Basic Econ. (if needed) or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

**Spring Semester 2**

3 †ENGL 2013 (completes core group g) if needed or †Advanced Level Elective
3 †MKTG 3433 Principles of Marketing
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

**Fall Semester 3**

3 †JOUR 3723 Advertising Principles or JOUR †‡3743 Public Relations Principles
3 †MKTG 4553 Consumer Behavior
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 †Upper-level elective in Fulbright College
16 semester hours

**Spring Semester 3**

3 †JOUR 3723 Advertising Principles (if not taken earlier) or †JOUR 3743 Public Relations Principles
3 †ENGL 2013 (completes core group g) if needed or †Advanced Level Elective
3 †JOUR 3633 Media Law
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

**Fall Semester 4**

3 JOUR Elective
3 †JOUR 4143 Public Relations Writing (or in Spring Semester 4)
3 ††JOUR 4423 Creative Strategy & Execution (or in Spring Semester 4)
3 ††JOUR 4453 Media Planning & Strategy (or in Spring Semester 4)
3 †Advanced Level Elective
1 General Elective
16 semester hours

**Spring Semester 4**

3 JOUR Elective
3 JOUR Elective
3 †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (if needed)
3 †Upper-level elective in Fulbright College (if needed) or
   General Elective
15-18 semester hours

**124 Total Hours**
Requirements for Departmental Honors in Journalism: The Journalism Honors Program gives upper-division undergraduates a chance to pursue journalistic research in the context of other academic disciplines. Honors candidates carry out independent study and research under the guidance of the journalism faculty and participate in honors classes in journalism and at least one other discipline. Outstanding student achievement will be recognized by the award of distinction “Journalism Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in cases of exceptional achievement and are based on the candidate’s total honors studies program. To be considered for such distinctions, students must earn a minimum cumulative 3.50 grade-point average in journalism.

Journalism Departmental Honors students must satisfy the general Fullbright College honors requirements as stated elsewhere in this catalog. In addition, for journalism departmental honors, they must complete a minimum of 12 hours in honors credits, with thesis credit determined by departmental rules. These requirements are specified as follows:

- 1. enter the program no later than the first semester of their junior year, and register for thesis beginning with the first semester of the junior year,
- 2. complete at least one journalism honors colloquium,
- 3. complete the journalism honors core research course JOUR 5043,
- 4. complete an approved honors colloquium in a second discipline,
- 5. complete and orally defend an honors thesis based on honors courses of study, and
- 6. earn a cumulative 3.50 grade-point average in journalism courses.

Four-Year Honors students who would like to major in journalism must meet all requirements for Journalism Department Honors.

More specific information on the Journalism Departmental Honors program, including the requirements for Four-Year Honors students, is available from the Journalism Department Honors advisor.

Combined Majors

Combined Major in Journalism and Political Science: The combined major in journalism and political science has been developed for students who wish to combine their strong interests in both journalism and political science. There are two journalism options available: Public Affairs Reporting and Political Advertising and Promotion. The journalism requirement may be satisfied by 24 semester hours of courses, including JOUR 1023, JOUR 1033, and JOUR 3633. The remaining hours are filled from the following options.

Those wishing to emphasize Public Affairs Reporting can choose from either print or broadcast news:

- Print News: JOUR 2013, JOUR 3013, JOUR 3023, JOUR 4043, and one additional journalism course.
- Broadcast News: JOUR 2032/2031L, JOUR 3073, JOUR 4043, JOUR 4863, and JOUR 4873.

Those wishing to emphasize Political Advertising and Promotion take the following courses: JOUR 3723, JOUR 3743, JOUR 4043, and 6 hours of advanced journalism courses. Students should check course prerequisites.

The political science requirement may be satisfied by 24 semester hours of courses, including PLSC 2003, PLSC 2013, PLSC 4373, and 15 additional hours of advanced political science courses elected from one or the other of two field concentrations. Those wishing to emphasize American political affairs may elect the additional hours from the following:

- PLSC 3103
- PLSC 3203
- PLSC 3603
- PLSC 3933
- PLSC 399VH
- PLSC 4223
- PLSC 4273
- PLSC 3113
- PLSC 3223
- PLSC 3853
- PLSC 394V
- PLSC 4193
- PLSC 4243
- PLSC 4813
- PLSC 3153
- PLSC 3243
- PLSC 3923H
- PLSC 3973
- PLSC 4203
- PLSC 4253
- PLSC 4823
- PLSC 3183
- PLSC 3253
- PLSC 393V
- PLSC 3973
- PLSC 4213
- PLSC 4263
- PLSC 4903

Alternatively, a foreign affairs concentration may be pursued by electing the advanced hours from the following courses:

- PLSC 3503
- PLSC 3523
- PLSC 3573
- PLSC 3603
- PLSC 3823
- PLSC 3853
- PLSC 3953
- PLSC 399VH
- PLSC 4273
- PLSC 4543
- PLSC 4803
- PLSC 3553
- PLSC 3803
- PLSC 3923H
- PLSC 3973
- PLSC 4503
- PLSC 4563
- PLSC 4843
- PLSC 3983
- PLSC 4513
- PLSC 4573
- PLSC 4583
- PLSC 4873

Journalism/Political Science Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following 8-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-4 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 JOUR 1023 Media and Society or JOUR 1033 Fundamentals of Journalism
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15-16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 ‡MATH course from selected concentration
3 PLSC 2003 American National Government (meets a requirement for core area b)
3 JOUR 1023 Media and Society or JOUR 1033 Fundamentals of Journalism (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 2
3 PLSC 2013 Introduction to Comparative Politics (meets a requirement for core area e)
3 ‡JOUR course from selected concentration
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 2
3 ‡Core from area g (if needed) or †Advanced Level Elective
3 †‡PLSC course from selected concentration
3 ‡JOUR course from selected concentration
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours
Fall Semester 3
3 †† JOUR course from selected concentration
3 †† PLSC course from selected concentration
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 3
3 †† JOUR course from selected concentration or ††JOUR 3633
3 †† PLSC course from selected concentration
3 † Core from area g (if still needed) or † Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Fall Semester 4
3 †† JOUR course from selected concentration
3 †† PLSC 4373 Political Communication
3 †† PLSC course from selected concentration
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 4
3 † PLSC course from selected concentration
3 † JOUR course from selected concentration or † JOUR 3633
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
4 General Electives
16 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Combined Major in Journalism and English: The combined major in journalism and English is recommended for those students who have a strong interest in these two related fields. The journalism requirement for the combined major is 24 semester hours including JOUR 1023, JOUR 1033, and JOUR 3633. The remaining 15 hours are filled from one of the two following options:
Print: JOUR 2013, JOUR 3013, JOUR 3023, JOUR 3123, and one additional journalism course.
Broadcast: JOUR 2023/2031L, JOUR 3072/3071L, JOUR 4863, JOUR 4973, and one additional journalism course.

For the eight-semester program plan and the English course requirements for the combined major see notes under department of English.

Journalism (B.A.) Teacher Licensure Requirements:
Students interested in obtaining teacher licensure may not obtain licensure in journalism alone. Licensure in another discipline must be obtained, and journalism may be added as an additional area of licensure. Please refer to the Secondary Education Requirements for Fulbright College Students on page 114 or contact your departmental adviser or an adviser in the College of Education and Health Professions.

Journalism for Agricultural Majors: A list of 18 hours of journalism courses is available for students in the College of Agricultural, Food and Life Sciences. See the Bumpers College section of this catalog for these journalism courses. This program is recommended for students who plan to work in public relations in these areas. It is also recommended for students who expect to enter extension work in agriculture and home economics and who will use the mass media to promote their programs.

SEE PAGE 370 FOR JOURNALISM (JOUR) COURSES

LATIN AMERICAN STUDIES (LAST)

Steven M. Bell
Chair of Studies
605 Kimpel Hall
479-575-2951
Web site: http://www.uark.edu/depts/lastinfo/

• Professors Britton (economics), Graff, Hehr (geography), Purvis (journalism and political science), Restrepo (foreign languages)
• Associate Professors Bell, Montgomery (journalism), Ryan (political science), Striffler (anthropology)
• Assistant Professors Ruiz, Villalobos (foreign languages), Erickson (anthropology), Kali, Méndez, Reyes (economics)

Students interested in Latin America and wishing to maximize their potential for academic, business, professional, or government careers related to the area, may earn a combined major or a minor in Latin American studies together with a major in another discipline in Fulbright College. Advice on appropriate combinations of Latin American studies with other majors as well as individual approval of such combinations may be obtained from the LAST program director. New students in this program must officially declare the combined major and notify the LAST program director. Degree checks must also be cleared with the program director. Freshmen and sophomores considering this program are advised to begin their study of Spanish or Portuguese as early as possible.

Requirements for a Minor in Latin American Studies:
Students wishing to minor in Latin American studies must fulfill the Colloquium (LAST 4003) and the language requirements described below, and must complete at least 12 hours from among the electives listed below. Electives must include courses from at least two different academic departments. Included in the 12 hours may be 3 additional hours of LAST 4003, provided the topic is different.

Requirements for a Major in Latin American Studies:
Language Competence: The student must complete SPAN 2013 (or equivalent) or PORT 2013 (or equivalent). Provisions are available for recognition of language skills gained by other means than formal course work taken at the University of Arkansas: See information under the entry in the department of foreign languages. Further functional work in Spanish or Portuguese as well as study and residence in a Latin American nation can serve to strengthen language competence and are encouraged.

Colloquium: The student must complete at least three hours in the interdepartmental colloquium, LAST 4003. The Colloquium may be repeated, with the adviser’s approval, provided the topic is different.

Electives: The student must complete 18 hours, in addition to the LAST Colloquium, in courses with specific Latin American content, or individualized study options under instructors teaching Latin American studies. Students choosing to take individualized readings or directed research courses must obtain the approval of the director of the area studies program. In the selection of the electives, the following conditions apply:
1. Courses must be selected from at least three different departments,
2. A maximum of nine hours may be submitted from courses taken in any one department.

The following courses and individualized study options may be taken in fulfillment of elective requirements (for detailed descriptions...
based upon the whole of the candidate's program of honors studies. 

degree distinctions are recommended only in exceptional cases and are 

"Latin American Studies Scholar 

these requirements will be recognized by the award of the distinction 

contributing most significantly to the topic). Successful completion of 

the major discipline (in the case of multiple majors, from the discipline 

area study. The thesis committee shall include a representative from 

uously for one of the departments contributing to this interdisciplinary 

and to take relevant honors colloquia or graduate courses (with permis-

enroll in the colloquium at least once for honors credit (LAST 4003H) 

399VH). The preferred method for satisfying the remaining hours is to 

complete 12 hours of honors credit in partial satisfaction of requirements 

Requirements for Honors in LAST: The Honors Program in Latin American studies gives junior and senior students of high ability the opportunity to enroll in enriched courses and conduct independent research culminating in an honors thesis. In addition to satisfying the general Fulbright College requirements for graduation and the basic eligibility requirements for honors as established by the Honors Council, candidates for honors in Latin American studies must complete 12 hours of honors credit in partial satisfaction of requirements for the co-major. One to six of these may be thesis hours (LAST 4003H) and to take relevant honors colloquia or graduate courses (with permission) in one of the departments contributing to this interdisciplinary area study. The thesis committee shall include a representative from the major discipline (in the case of multiple majors, from the discipline contributing most significantly to the topic). Successful completion of these requirements will be recognized by the award of the distinction “Latin American Studies Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in exceptional cases and are based upon the whole of the candidate’s program of honors studies.

SEE PAGE 374 FOR LATIN AMERICAN STUDIES (LAST) COURSES

<table>
<thead>
<tr>
<th>MATHEMATICAL SCIENCES (MASC)</th>
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<tbody>
<tr>
<td>Allan Cochran</td>
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<tr>
<td>Chair of the Department</td>
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<tr>
<td>301 Science and Engineering</td>
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<td>479-575-3351</td>
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<td>• Distinguished Professors Schein, Khavinson</td>
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<td>• Professors Akeryod, Brewer, Cochran, Feldman, Luecking, Madison</td>
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<td>• Professors Emeriti Duncan, Dunn, Keown, Kimura, Long, Scroggs, Summers</td>
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<td>• Associate Professors Arnold, Capogna, Goodman-Strauss, Johnson, Lanzani, Meaux, Meek, Petris, Ryan</td>
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<td>• Associate Professors Emeriti Monroe, Sekiguchi</td>
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<td>• Assistant Professors Chan, Hogan, De Oliveira, Petrus, Rieck, Song</td>
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<td>• Visiting Assistant Professor Shores</td>
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<td>• Instructors Tjani, Woodland</td>
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<td>• Instructor Emeritus Mackey</td>
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Requirements for a Major in Mathematics, B.A. Degree:
MATH 2103, MATH 2574, MATH 4932 and 18 semester hours of courses in mathematics numbered above 3000, including MATH 3083 and MATH 3113.

Writing Requirement for both B.A. and B.S. Degrees: The writing requirement for mathematics majors will be satisfied by writing a paper based on the student's research of a mathematical topic under the direction of a faculty member. Typically, one hour of credit in MATH 400V will be awarded for successfully completing the paper. An honors paper or senior thesis will satisfy this requirement. The student should consult his or her adviser for details.

Mathematics B.A. Eight-Semester Degree Program
Students wishing to follow the eight-semest est degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
4 MATH 2554 Calculus I
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
4 MATH 2564 Calculus II
3 MATH 2103 Discrete Mathematics
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
16 semester hours

Fall Semester 2
4 MATH 2574 Calculus III
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
4 General Electives
14 semester hours
The following eight-semester plan refers to additional BS Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 3 ENGL 1013 Composition I
4 ‡MATH 2554 Calculus I
3 Core from areas a, b, c, or e (as needed)
3 Core from areas a, b, c, or e (as needed)
3 General Elective
16 semester hours

Spring Semester 1
3 ‡‡MATH 3113 Introduction to Abstract Algebra I
3 ‡‡MATH/STAT Elective 3000-4000 Level
3 Core from areas a, b, c, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 2
3 ‡‡MATH 3083 Linear Algebra
3 ‡Core from area g (if needed) or Core from areas a, b, c, d, or e
(as needed)
3 Core from areas a, b, c, d, or e (as needed)
4 Core from area f (as needed)
3 General Elective
16 semester hours

Spring Semester 2
3 ‡‡STAT 3013 Probability and Statistics
3 ‡Advanced Level Elective in Fulbright College
3 Core from areas a, b, c, d, or e (as needed)
3 General Elective Core from areas a, b, c, d, or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡‡MATH 3733 Foundations of Geometry
3 ‡‡MATH/STAT Elective 3000-4000 Level
1 ‡‡MATH 400(1) Senior Writing Project
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
3 General Elective
16 semester hours

Spring Semester 4
2 ‡‡MATH 4932 Math Major Seminar
3 ‡‡MATH/STAT Elective 3000-4000 Level
3 Core from areas a, b, c, d, or e (as needed)
3 General Elective
3 General Elective
14 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Major in Mathematics, B.S. Degree: As a part of the requirements for a B.S. degree with a major in mathematics, the student must complete MATH 2103, MATH 2574, MATH 3083, MATH 3113, MATH 3404, MATH 4513, MATH 4932, and CSEC 1023/1023L or CENG 1113/1111L. In addition, for the B.S. degree in mathematics, the student is required to complete one of the following three options:

1. A program for the student who wishes to prepare for either applied work in mathematics or graduate work in some field other than mathematics or statistics,
2. A program for the student who is seeking a broad background in mathematics or who wishes to study mathematics at the graduate level,
3. A program for the student who wishes to emphasize statistics or who intends to study statistics at the graduate level.

The courses required for option (1) are MATH 3423, either MATH 4353 and MATH 4363 or STAT 3013 and STAT 4003, plus three semester hours of electives from mathematics courses numbered above 3000. Strongly recommended electives in this program are MATH 4523 and MATH 4443.

The courses required for option (2) are MATH 4523, MATH 4443, MATH 4113 and three hours of electives from mathematics courses numbered above 3000.

The courses required for option (3) are MATH 3353, STAT 3013, STAT 4003, STAT 4001L, STAT 4033, STAT 4043. Strongly recommended electives in this program are STAT 5103 and STAT 5113.

All of the electives used in fulfilling the requirements for either of the baccalaureate programs in mathematics must be approved by the student’s adviser.

The science requirement for the Bachelor of Science degree in mathematics consists of two of the five course sequences as listed:
1. BIOL 1543/1541L and one of BIOL 2533, BIOL 1613/1611L,
   BIOL 1603/1601L, or BIOL 2013/2011L
2. CENG 1123/1121L and CSCE 2143
3. CHEM 1103/1101L, CHEM 1123/1121L
4. GEOL 1113/1111L, GEOL 1133/1131L
5. PHYS 2054, PHYS 2074 (College Physics will not substitute)

In addition, one advanced course must be chosen from one of the two chosen areas. Courses taken to satisfy this requirement must be approved by the department of mathematical sciences.

A 2.00 cumulative grade-point average on all work completed in the department of mathematical sciences will be required for graduation with a B.A. or B.S. degree.

Writing Requirement for both B.A. and B.S. Degrees: The writing requirement for mathematics majors will be satisfied by writing a paper based on the student’s research of a mathematical topic under the direction of a faculty member. Typically, one hour of credit in MATH 400V will be awarded for successfully completing the paper. An honors paper or senior thesis will satisfy this requirement. The student should consult his or her adviser for details.

Mathematics B.S. Eight-Semester Degree Programs with Option 1 Applied

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The B.S. degree in mathematics includes three options: Applied, Pure, and Statistics. The eight-semester plan for the Applied option is shown below, and the eight-semester plans for the other options are available in Section 2 of the Catalog of Studies online at http://catalogofstudies.uark.edu/.

The following eight-semester plan refers to additional BS Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.
4 †MATH 2564 Calculus II
3 †MATH 2103 Discrete Mathematics
3 Core from areas a, b, c or e (as needed)
4 CSCE 1113/1111L Programming Foundations
17 semester hours

Fall Semester 2
4 †MATH 2574 Calculus III
3 †‡MATH 3083 Linear Algebra or Elective
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
4 Science Sequence 1 (see above)
17 semester hours

Spring Semester 2
4 †‡MATH 4003/4001L Statistical Methods and Lab or †‡MATH 4353 Numerical Linear Algebra
3 Core from area f or Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
4 Science Sequence 1 (continued, see above)
17 semester hours

Fall Semester 3
4 †‡MATH 4513 Advanced Calculus
3 Science Sequence 2 (see above)
3 Core from areas a, b, c or e (as needed)
3 General Elective
16 semester hours

Spring Semester 3
3 †‡MATH 3113 Abstract Algebra
3 †‡MATH/STAT 3000-4000 Level Elective
4 Science Sequence 2 (see above)
3 Core from areas a, b, c or e (as needed)
3 General Elective
16 semester hours

Fall Semester 4
3 †‡MATH 4513 Advanced Calculus
4 Science Sequence 2 (continued, see above)
3 Core from areas a, b, c or e (as needed)
3 General Elective
1 †‡MATH 400(1) Senior Writing Project
14 semester hours

Spring Semester 4
2 †‡MATH 4932 Math Major Seminar
3 †‡MATH/STAT 3000-4000 Level Elective
4 †‡Science 3 (Advanced Course in Sequence 1 or 2 above)
3 General Elective
3 General Elective (as needed)
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for Departmental Honors in Mathematics: The Departmental Honors Program in Mathematics is designed for the superior student and is intended to help the student develop a more comprehensive view of the nature of mathematics. The program provides a vehicle for the recognition of the achievements of work beyond the usual course of study and earns the student the distinction “Mathematics Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

Graduation with honors: The candidate must satisfy the requirements set forth by the Honors Council. The candidate must also obtain at least a 3.50 grade-point average in mathematics courses numbered MATH 2554, MATH 2564, MATH 2574, MATH 3083, MATH 3113, MATH 3404, and MATH 4513, as well as in the additional mathematics courses necessary to complete the requirements for the chosen option. In addition, a grade of “D” or “F” in any other course offered by the department disqualifies a student for honors.

Candidates must take one year of honors mathematics in their senior year. This course will require an acceptable paper and will carry two hours of credit per semester. The quality of this paper, along with the execution of the rest of the student’s honors program including the overall academic performance, will be used in determining the distinction between Honors and High Honors.

Requirements for a Minor in Mathematics: MATH 2103, 2564, and 9 hours (3 courses) selected from MATH 2574, MATH 3083, MATH 3103, MATH 3113, MATH 3404, and MATH 4513.

Requirements for a Minor in Statistics: MATH 2554 and 12 hours of non-cross-listed courses in the statistics section of this catalog, including 9 hours in courses numbered 3000 and above. A student must notify the department of his or her intent to minor.

Students in Fulbright College of Arts and Sciences who, in the opinion of the department of mathematical sciences, need additional work in the fundamentals are required to take MATH 0003. Using the student’s record and their ACT or Mathematics Placement Test scores, a student’s adviser will suggest enrollment in appropriate courses (a mathematics ACT score below 19 indicates placement in MATH 0003; a mathematics ACT score of 19, 20, or 21 indicates placement in MATH 1203C).

Mathematics (B.A. or B.S.) Teacher Licensure Requirements: Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students wanting to teach mathematics in middle school should consult with a middle level adviser in the College of Education and Health Professions.

Statistics (STAT)
Laurie Meaux
Chair of Studies
301 Science and Engineering
479-575-3351

• Associate Professors Meaux, Petris
• Assistant Professors De Oliveira, Song

Requirements for a Minor in Statistics: MATH 2554 and 12 hours of non-cross-listed courses, including 9 hours in courses numbered 3000 and above. A student must notify the department of mathematical sciences of his or her intent to minor.

SEE PAGE 405 FOR STATISTICS (STAT) COURSES
MEDICAL SCIENCES AND DENTISTRY
See page 121, under Combined Academic and Medical or Dental Degree and also the discussion of the pre-medical programs and the pre-dental program under the section on Health Related Professions.

MEDIEVAL AND RENAISSANCE STUDIES (MRST)
William Quinn
Chair of Studies
333 Kimpel Hall
479-575-4301
Web site: http://cavern.uark.edu/depts/h2p/index.html

• Professors Candido, Cornell (V.), Detels, Goodstein, Gross, Levine, Quinn, Spellman, Tsai, Waligorski
• Associate Professors Coon, Finlay, Fredrick, Horton, Jacobs, Stephens, Tucker
• Assistant Professors Cornell (R.), Sexton

The Medieval and Renaissance studies minor is administered by the Humanities program. This minor encourages undergraduate students to pursue an interdisciplinary study of all aspects of the Middle Ages and Renaissance as a complement to their major field of study.

Requirements for a Minor in Medieval and Renaissance Studies (MRST): (15 credit hours) Students must take HIST 1113H or HIST 1113, Honors World Civilization I or non honors section, or HUMN 1124H/1120E (the Medieval segment of the Honors Humanities Project) and complete at least 12 additional credit hours selected from the courses listed below. A maximum of 6 hours may be presented from courses taken in the student’s designated major. Required Core Course (3 hours)
HUMN 1124H Honors Equilibrium of Cultures, 500-1600 CE and discussion section HUMN 1120E, or
HIST 1113H Honors World Civilization I (may also be taken as non- honors, HIST 1113 World Civilization I)
12 hours of electives to be chosen from the following (a maximum of six hours may be presented from courses taken in the student’s major department):
ARHS 4843 Medieval Art
ARHS 4853 Italian Renaissance Art
ARHS 4863 Northern Renaissance Art
ARCH 2233 History of Architecture I
ARCH 4023 Adv Architectural Studies
DRAM 4773 Acting Shakespeare
ENGL 3433 Intro. to Chaucer
ENGL 4303 Intro. to Shakespeare
LATN 5633 Medieval Latin
SPAN 5203 Medieval Spanish Literature
HIST 3033 Islamic Civilization
HIST 4043 Late Antiquity and the Early Middle Ages
HIST 4053 Late Middle Ages
HIST 4073 Renaissance and Reformation, 1300-1600
HIST 4163 Tudor-Stuart England
HIST 4313 China to 1644
HIST 4353 Middle East, 600-1500
HIST 4373 Mongol and Mamluk Middle East, 1250-1520
HIST 4393 Ottoman Empire and Iran (1300-1722)
HUMN 3923H Honors Colloquium (when offered as a MRST course)
HUMN 425V Special Topics Colloquium (when offered as a MRST course)
MUHS 3703 History of Music to 1800
PHIL 4013 Platonism and the Origin of Christian Theology
PHIL 4023 Medieval Philosophy
PLSC 3953 Ancient and Medieval Political Thought

MIDDLE EAST STUDIES (MEST)
Vincent J. Cornell
Director, King Fahd Center for Middle East and Islamic Studies
202 Old Main
479-575-4157
Web site: http://www.uark.edu/depts/mesp/index.htm
E-mail: mest@uark.edu

• Professors Cornell (V.) (history), Farah (curriculum and instruction), Haydar (foreign languages), Paradise (geography), Rose (anthropology), Swedenburg (anthropology)
• Associate Professors Adler (philosophy, biblical Hebrew), Coon (history), Gordon (history), Kahf (comparative literature), Reid (political science), Tucker (history), Wolpert (music)
• Assistant Professors Casana, D’Alisera (anthropology), Ghadbian (political science)
• Research Associate Professor Cornell (R.) (foreign languages)
• Research Assistant Professor Halman (Middle East studies, religious studies)

Students interested in the Middle East and wishing to maximize their potential for academic, business, professional, or government careers related to the area, may earn a major in Middle East studies with a required second major in an approved area such as anthropology, economics, foreign languages, geography, history, journalism, and political science. New students entering the program are required to notify both the major adviser and the MEST director of their intention to participate. Freshmen and sophomores considering this program are advised to begin their study of a Middle East language as early as possible. Students may also earn a minor in Middle East studies.

Requirements for a Major in MEST: To attain a major in MEST, the student is required to have a second major in one of the following approved areas: anthropology, communication, economics (BA), French, geography, history, international relations, journalism, political science, sociology, or Spanish. Up to nine hours of courses in the second major with Middle East content may be counted toward the MEST major with the permission of the MEST director.

Total Hours Required: (30 semester hours) Students must complete 3 hours in Gateways to the Middle East (MEST 2013), 3 hours in the MEST Colloquium (MEST 4003), 6 hours of Arabic language beyond the Fulbright College language proficiency requirement (ARAB 2013), and 18 hours in additional MEST or MEST-approved core courses. MEST courses must be in at least two disciplines, with no fewer than 9 hours of MEST core courses in each discipline.

Gateways to the Middle East: (3 hours) Students must complete 3 hours of Gateways to the Middle East (MEST 2013).

Middle East Studies Colloquium: (3 hours) Students must complete at least 3 hours in the Middle East Studies Colloquium (MEST 4003). The Colloquium may be repeated with a change of subject for a maximum of 6 credits.

Arabic Requirement: (6 hours of MEST credit) Students must complete 6 hours of Arabic language beyond the Fulbright College language proficiency requirement (ARAB 2013). Courses approved by the MEST director and completed in a summer intensive Arabic program or study-abroad program in an Arabic speaking country may substitute for all or part of this requirement.

MEST Core Courses: To count for MEST credit, courses not on the following list must be approved by the student’s MEST major adviser and the MEST director. Individualized readings, directed research courses, or courses in a second Middle Eastern language such as biblical Hebrew or Aramaic may count as MEST core courses with the approval of the MEST major adviser and MEST director.
MEST Core Courses:
- ANTH 3123 Anthropology of Religion
- ANTH 3033 Egyptology
- ANTH 4123 Ancient Middle East
- ANTH 4253 Peoples and Cultures of World Religions
- ANTH 4256 Archeological Field Session
- ANTH 4533 Middle East Cultures
- ANTH 4803 Historical Archeology
- ANTH 4913 Topics in the Middle East
- ARAB 4213 Intro. to Arab Culture
- GEOG 2103 Emerging Nations
- GEOG 4033 Geography of the Middle East
- HIST 3033 Islamic Civilization
- HIST 3043 History of the Modern Middle East
- HIST 3473 Palestine and Israel in Modern Times
- HIST 3923H Honors Colloquium (approved selected topics)
- HIST 4353 Middle East 600-1500
- HIST 4373 Mongol and Mamluk 1250-1520
- HIST 4393 The Ottoman Empire and Iran 1300-1722
- HIST 4413 New Women in the Modern Middle East
- HIST 4433 Social and Cultural History of the Modern Middle East
- HUMN 2213 Intro. to World Religions
- HUMN 425V Colloquium (approved selected topics)
- MEST 2003 Islam: History and Practice
- MEST 2013 Gateways to the Middle East
- MEST 4003 Middle East Studies Colloquium
- MEST 4003H Honors Middle East Studies Colloquium
- PLSC 3523 Politics of the Middle East
- PLSC 4583 Political Economy of the Middle East
- PLSC 4593 Islam and Politics
- PLSC 4843 The Middle East in World Affairs
- WLIT 3983/603 Special Studies: (approved selected topics)

Requirements for a Minor in Middle East Studies:
Total Hours Required: (18 semester hours)
Students must complete MEST 2013 Gateways to the Middle East (3 hours), MEST 4003 MEST Colloquium, 6 hours of Arabic beyond the Fulbright College language proficiency requirement (ARAB 2013), and a minimum of 6 additional hours of MEST core courses.
Gateways to the Middle East: (3 hrs) Students must complete three hours in the MEST 2013 Gateways to the Middle East.
Middle East Studies Colloquium: (3 hours) Students must complete three hours in the Middle East Studies Colloquium (MEST 4003).
Arabic Requirement: (6 hours of MEST credit) Students must complete 6 hours of Arabic language beyond the Fulbright College language proficiency requirement (ARAB 2013). Courses approved by the MEST director and completed in a summer intensive Arabic program or study-abroad program in an Arabic speaking country may substitute for all or part of this requirement.
MEST Core Courses: (6 hours) Students must complete an additional 6 hours of MEST core courses supervised by faculty participating in the program. Students choosing to take individualized reading or directed research courses as a part of the minor must obtain the approval of the MEST director and their major adviser.

MUSIC (MUSC)

Stephen Gates
Chair of the Department
201 Music Building
479-575-4701
Web site: http://www.uark.edu/depts/uamusic/
E-mail: music@uark.edu

- Professors Cencel, Detels, Gates, Greeson, Mains, Mueller,
- Research Professor Markham
- Professors Emeriti Ballenger, Bright, Brothers, Cowell, Groh, Jackson, Janzen, Umiker, Widder, Worthley
- Associate Professors Jones, Margulis, Misenhelter, Yoes
- Associate Professors Emeriti Colber, Johnson, Nastasi
- Assistant Professors Cholhitchitchanta, Hickson, Langager, Pierce, Rulli
- Visiting Associate Professor Goza
- Visiting Assistant Professors Delaplain, Gunter, Jekova-Goza, Lacy, Morris, Pratchard

The music department strives to enrich and inspire the human mind and spirit through the pursuit of excellence in creative activity, research, teaching, and service. The Department of Music is an accredited institutional member of the National Association of Schools of Music. The requirements for entrance and for graduation as set forth in this catalog are in accordance with the published regulations of that Association.

Degrees in Music

Two baccalaureate degrees in music are available: the Bachelor of Music (see page 121 for general education requirements, see below for more detailed specific requirements), and the Bachelor of Arts with a Major in Music (see page 119 for general education requirements, see below for more detailed specific requirements). To achieve junior standing in the curriculum leading to the Bachelor of Arts degree with a major in music and the Bachelor of Music degree, the student must have completed 56 hours and must have maintained a cumulative grade average of “C” in all music courses, with the exception of ensemble, by the end of the fourth semester. The student must also have earned a grade average of not less than “B” in the major applied field of study during the sophomore year. This standing is prerequisite to all 3000-level courses and above in music.

All music majors are required to enroll in an ensemble in each semester of residence appropriate to their major area and with consent of their adviser.

All music majors, with exceptions noted below, are required to enroll in MUEN 3411 Concert Choir during the first semester of their freshman year, or in their first semester of residence for transfer students, who have not met this requirement. Exceptions to the requirement would include all students pursuing the Bachelor of Music (BM) degree for whom voice or piano is the major applied area.

Piano Proficiency Requirement: Students pursuing a Bachelor of Music degree must pass a piano proficiency examination upon entering the University of Arkansas or must register in piano class until this requirement is met.

On the basis of prior study in music, a student may be advised to omit one or more of the semesters of Aural Perception (MUTH 1621, MUTH 1631, MUTH 2621, MUTH 2631). Students will receive college credit for the omitted aural perception courses when they have validated their higher placement by passing the course in which they are placed with a grade of “B” or better.

Writing Requirement: Students can meet the Fulbright College writing requirement by submission of a satisfactory term paper for MUHS 4253.

Requirements for a Major in Music leading to a Bachelor of Music Degree: MUTH 1603, MUTH 1621, MUTH 1631, MUTH 2603, MUTH 2621, MUTH 2631, MUTH 3603 (except for music education majors), MUTH 3613, MUTH 4703 (except for music education majors), MUHS 3703, MUHS 3713, MUHS 4253 (except for music education majors), MUPD 3801, MUAC 2111, MUAC 2121 plus the following specific requirements by major area of emphasis.

Piano Performance Major: Applied Piano 28 hours, of which 16 must be at the upper level (including MUPD 3201, 4201); Secondary MUAP or MUAC (2); MUHS 4803, MUHS 4813; MUTH 4322;
MUPD 3811 or MUPD 3861; MUPD 4863; MUEN 3411, 2, MUEN 3451, 6, electives (may be non-music): 4.

**Voice Performance Major:** Applied Voice 24 hours, of which 12 must be at the upper level (including MUAP 3201, MUAP 4201); Secondary MUAP or MUAC (4); MUAC 1121, MUAC 1141, MUAC 1151, MUPD 3861, MUHS 4763, MUHS 4773; Ensemble: 8 hours (see adviser for ensemble selection); electives (may be non-music): 4. (NOTE: 9 hours additional foreign language is also required, foreign language study must include French, German, and Italian.)

**String Performance Major:** Applied 28 hours, of which 16 must be at the upper level (including MUAP 3201, MUAP 4201); Secondary MUAP or MUAC (4); MUHS 4703, MUEN 3431, 8, MUEN 3501, 4; electives (may be non-music): 10.

**Woodwind, Brass, or Percussion Performance Major:** Applied 24 hours, of which 12 must be at the upper level (including MUAP 3201, MUAP 4201); Secondary MUAP or MUAC (4); MUTH 4612, MUHS 4733, Large Ensembles (8); Small Ensembles (4); electives (may be non-music): 11.

**Classical Guitar Performance Major:** Applied 28 hours, of which 16 must be at the upper level (including MUAP 3201, MUAP 4201); Secondary MUAP or MUAC (4); MUHS 4703, MUTH 4612; Ensemble: 8 hours (see adviser for ensemble selections); electives (may be non-music): 11.

**Theory or Composition Major:** MUAP 110V, 310V (major-level applied 16 hours), MUAC 1221, MUAC 1231, MUAC 2221, MUAC 2231 (unless waived), MUPD 3811 or MUPD 3861, MUTH 4612, Ensemble: 8 hours (see adviser for ensemble selections) Composition: MUTH 164V, MUTH 364V (14), MUAP 4201; electives (may be non-music): Theory: MUTH 164V, MUTH 364V (6), MUTH 498V (3); electives (may be non-music): demonstration of piano skills appropriate for a composer or theorist.

**Music Education:** (all emphases; in addition to requirements for the Bachelor of Music degree listed above) MUTH 4612; 14 MUAP/MUAC (applied, including recital — see below); MUAC 1221, MUAC 1231, MUAC 2221, MUAC 2231 (except for piano majors — see below); 8 MUEN (see below); MUPD 3812, MUPD 3802, MUPD 3833 and MUPD 4112; plus the following specific requirements by emphasis.

Students who wish to apply for admission to the internship program in music education must complete the following stages.

**Stage I: Complete an Evaluation for Internship**

Students must meet the following criteria to be cleared for the internship:

1. Declare the major in music education in the Fulbright Advising Center, 518 Old Main.
2. Successful completion of the PRAXIS I test by meeting or exceeding the Arkansas Department of Education cut-off scores. This test should be taken after the student has completed 30 credit hours and upon completion of ENGL 1013, ENGL 1023, and MATH 1203.
3. Obtain a “C” or better in the following pre-education core courses: CIED 3023, CIED 3033.
4. Obtain a “C” or better in MUED 3021, MUED 3021, and MUED 3833.
5. Satisfactory completion of the Evaluation for Internship form. The evaluation form must be completed by October 1 prior to doing a fall internship or March 1 prior to doing a spring internship. The completed form must be returned to the Coordinator of Teacher Education, 8 Peabody Hall, no later than the stated deadline.
6. Complete the B.M. degree with a cumulative GPA of 2.50 or higher. The degree must be posted to your University of Arkansas transcript at the Registrar’s Office prior to internship.
7. Obtain departmental clearance for internship based on successful completion of portfolios, evaluation for internship, GPA requirements, course work requirements, selected written recommendations, an interview, and/or other requirements specified by your program.

All requirements in Stage I must be met to be cleared for the internship. Please contact the Coordinator of Teacher Education, 8 Peabody Hall, College of Education and Health Professions for more information.

**Stage II: Internship**

1. Complete the one-semester internship at an approved site in Washington or Benton counties.
2. Complete PRAXIS II requirements. See your adviser for completion dates.

NOTE: Students should always consult the Coordinator of Teacher Education for any licensure requirement changes. Students will not be licensed to teach in Arkansas until they have met all requirements for licensure as set forth by the Arkansas Department of Education.

Usually licensure in another state is facilitated by qualifying for a license in Arkansas. An application in another state must be made on the application form of that state, which can be obtained by request from the State Teacher Licensure office in the capital city. An official transcript should accompany the application. In many instances the applications are referred to the Coordinator of Teacher Education to verify program completion in teacher education.

**Music Education, Wind/Percussion:** 14 MUAP to consist of 8 MUAP 110V, 5 MUAP 310V, MUAP 3201; 8 MUEN to consist of 2 MUEN 3441; 6 selected from MUEN 3441, MUEN 3441, MUEN 3461, MUEN 3481, MUEN 3511; 9 additional MUAC to consist of MUAC 1331, MUAC 1341, MUAC 1351, MUAC 1361, MUAC 1401, MUAC 2141, and either MUAC 1301 or MUAC 1311, MUPD 3811, MUPD 4293; electives (may include MUTH 1003 and any MUEN): 8.

**Music Education, Strings:** 14 MUAP to consist of 8 MUAP 110V, 5 MUAP 310V, MUAP 3201; 8 MUEN 3441; 8 additional MUAC to consist of 2 chosen from MUAC 1331, MUAC 1341, MUAC 2141, MUAC 1301, MUAC 1311, MUAC 1351, MUAC 1361, MUAC 1371, MUPD 3811, MUPD 4273; electives (may include MUTH 1003 and any MUEN): 8.

**Music Education, Choral/Voice:** 11 MUAP to consist of 5 MUAP 110V, 5 MUAP 310V, MUAP 3201, MUAC 1121, MUAC 1141, MUAC 1151, 8 MUEN selected from MUEN 3441, MUEN 3451, 3 MUAC to include MUAC 1371, 1 of MUAC 1301 or MUAC 1311, 1 of MUAC 1331, MUAC 1341, MUAC 1351, MUAC 1361, or MUAC 2141, 2 MUAP 1001 Piano, 1 MUAP/MUAC by advisement, MUPD 3861, MUPD 4283, electives (may include MUTH 1003 and any MUEN): 8.

**Music Education, Choral/Piano:** 14 MUAP to consist of 8 MUAP 110V, 5 MUAP 310V, MUAP 3201, MUAC 1121, MUAC 1141, MUAC 1151, 8 MUEN selected from MUEN 3441, MUEN 3451, 3 MUAC to include MUAC 1371, 1 of MUAC 1301 or MUAC 1311, 1 of MUAC 1331, MUAC 1341, MUAC 1351, MUAC 1361, or MUAC 2141, 4 MUAP 1001/3001 Voice, MUPD 3861, MUPD 4283, electives (may include MUTH 1003 and any MUEN): 8.

**Requirements for a Major in Music leading to a Bachelor of Music Degree with Elective Studies in Business:** MUTH 1603, MUTH 1621, MUTH 1631, MUTH 2603, MUTH 2621, MUTH 2631, MUTH 3603, MUTH 3613; MUHS 3703, MUHS 3713; MUPD 3801; MUAP 2111, MUAP 2121, MUAC 1221, MUAC 1231, MUAC 2221, MUAC 2231; 14 MUAP to consist of 8 MUAP 110V; 5 MUAP 310V, MUAP 3201; 7 MUEN to be selected with the consent of the student’s adviser; plus the student must declare one concentration for a Business Administration Minor for Non-Business Students and fulfill all requirements for that declared minor.

**Requirements for a Major in Music leading to a Bachelor of Arts Degree:** This program is for undergraduates who wish to major in music as part of a liberal arts program. A minimum of 42 semester...
hours in music to include: MUTH 1603, MUTH 1621, MUTH 1631, MUTH 2603, MUTH 2621, MUTH 2631, MUTH 3603, MUTH 3613, MUHS 3703, MUHS 3713, MUHS 4253, MUAC 1221, MUAC 1231, 8 hours (normally one or two hours per semester) of applied study on voice or on one instrument and 4 hours (4 semesters) of ensemble to be selected with the consent of their advisers.

A Bachelor of Arts degree with a combination of music-drama major may be obtained. See the chairman of the music department for the specific courses required for the degree.

**Requirements for Departmental Honors in Music:** The Departmental Honors Program in Music provides upper-division undergraduate students an opportunity to participate formally in scholarly, creative, or performance music activities. Honors candidates carry out independent study, research and performance under the guidance of the music faculty and participate in special honors classes and seminars. They must take 12 hours (which may include 6 hours of thesis) in Honors Studies.

Each honors student will be required to select an honors committee. The committee will comprise the honors thesis adviser (a Music Department faculty member and major teacher in the area of the honors project), a second faculty member from the Music Department chosen by the student, and a member of the Honors Council appointed by the Honors College. This committee is responsible for hearing and seeing the work of the student in the area of the honors project and will administer the oral examination to the candidate at the end of the last semester of the student’s work. The committee then recommends to the Honors Council whether or not the student receives honors in music. Outstanding student achievement will be recognized by awarding the distinction "Music Scholar Cum Laude" at graduation. The award of higher degree distinctions is recommended only in truly exceptional cases and is based upon the whole of the candidate’s program of honors studies.

The student may elect to do the honors project in one of five areas: performance, music history and literature, theory, composition, or music education. Honors work may be done in an area other than the student’s major area that is, a student majoring in voice performance may elect to do honors work in music history, theory, or composition, etc.

If a student wishes to devise his or her own honors project in consultation with a supervising professor and with the permission of the department chair, he or she may be granted honors. If a student wishes to combine work in more than one field and if the committee approves, he or she may be granted honors in more than one area, although the designation on the diploma will read “in music.”

**The requirements for work in each area are as follows:**

1. **Performance**
   - 2 semesters of MUAP 310VH, with concurrent registration in MUAP 3201H and MUAP 4201H
   - Other music department honors courses are recommended, see honors adviser. (A program file representing the student’s range of performance activities during the junior and senior years will be maintained for the department file and for the Honors Council. Cassette tapes of the junior and senior recitals will be filed with the Honors Office.)

2. **History and Literature**
   - Junior year: MUHS 5973 Seminar in Bibliography and Methods of Research
   - Senior year: MUSC 490VH Honors Essay

3. **Theory**
   - Junior year: MUHS 5973 Seminar in Bibliography and Methods of Research
   - Senior year: MUSC 490VH Honors Essay

4. **Composition**
   - At least six hours of MUTH 364VH Honors Composition II
   - A full program of original compositions or equivalent.

5. **Music Education**
   - Junior year: MUED 5513 Seminar: Resources in Music Education
   - Senior year: MUSC 490VH Honors Essay

**Sample Music B.A. Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program, and should consult their music adviser for an eight-semester plan that is specific to their vocal, instrumental or theoretical emphasis area in music. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 MUTH 1603 Music Theory I (spring only)
1 MUTH 2631 Aural Perception I
1 MUAC 1231 Piano for Music Majors I (fall only)
2 MUAP 110V Applied Voice/Instrument (usually 2 hours)
1 †MUEST Music Ensemble (see adviser)
3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013
17 semester hours

**Spring Semester 1**

3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or Core from areas a, b, c, d or e (as needed)
3 MUTH 1603 Music Theory I (spring only)
1 MUTH 1621 Aural Perception I
1 MUAC 1231 Piano for Music Majors II (spring only)
2 MUAP 110V Applied Voice/Instrument (usually 2 hours)
1 †MUEST Music Ensemble (see adviser)
3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013 (as needed)
17 semester hours

**Fall Semester 2**

3 †MUTH 2603 Music Theory II
1 MUTH 1631 Aural Perception II
2 MUAP 110V Applied Voice/Instrument (usually 2 hours)
1 †MUEST Music Ensemble (see adviser)
3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013 (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

**Spring Semester 2**

3 †Core from area g (if needed) or †Advanced Level Elective
3 ††MUTH 3603 Music Theory III
1 †MUTH 2621 Aural Perception III
2 MUAP 110V Applied Voice/Instrument (usually 2 hours)
1 ††MUEST Music Ensemble (see adviser)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

**Fall Semester 3**

3 ††MUTH 3613 Music Theory IV
Sample Music B.M. Eight-Semester Degree Program for Music Education

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program, and should consult their music adviser for an eight-semester plan that is specific to their vocal, instrumental or theoretical emphasis area in music. The following eight-semester plan refers to additional B.M. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 196 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

For this sample, the Music Activity Course Group requires seven 1-hour classes: MUAC 1331, 1341, 1351, 1361, 1371, 2141, and either 1301 or 1311.

Fall Semester 1
3 ENGL 1013 Composition I
3 MUTH 1003 Basic Musicianship (if required) or Core from areas a, b, or c (as needed)
1 MUAC 1221 Piano for Music Majors I (fall only)
2 MUAP 1102 Applied Voice/Instrument
1 †‡MUEN 3411 Concert Choir

Fall Semester 2
3 †MUTH 2603 Music Theory II (MUTH 1603, MUTH 2603)
1 †MUTH 1631 Aural Perception II
1 †MUAC 2221 Piano for Music Majors III (fall only)
2 †MUAP 2111/2121 Music Technology I/II
2 MUAP 1102 Applied Voice/Instrument
1 †‡MUEN 3441 Marching Band
3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013 (as needed)
1 One course from Music Activity Group (see above)
15 semester hours

Spring Semester 3
2 †‡MUTH 4612 Orchestration
3 †‡MUHS 3713 History of Music 1800-present (MUHS 3703)
2 †‡MUAP 3102 Applied Voice/Instrument
1 †‡MUEN Music Ensemble (see adviser)
1 †‡MUPD 3811 Conducting II: Instrumental Music
1 †‡MUED 3021 Supervised Practicum in Teaching Musical Skills
1 One course from Music Activity Group (see above)
15 semester hours

Fall Semester 3
3 †‡MUHS 3703 History of Music to 1800
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
17 semester hours

Spring Semester 4
3 †‡MUTH 3613 Music Theory IV (MUTH 1603, MUTH 2603)
1 †MUTH 2631 Aural Perception III
1 †MUAC 2221 Piano for Music Majors IV (fall only)
2 †MUAP 3102 Applied Voice/Instrument
1 †‡MUEN Music Ensemble (see adviser)
1 One course from Music Activity Group (see above)
15 semester hours

Fall Semester 4
3 †‡MUHS 4253 Special Topics in Music History
3 †‡Upper-Level Elective from Fulbright College
4 Core from area f (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours
### Sample Music B.M. Eight-Semester Degree Program for Music Performance

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program, and should consult their music adviser for an eight-semester plan that is specific to their vocal, instrumental or theoretical emphasis area in music. The following eight-semester plan refers to additional B.M. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 196 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Students in the Voice Performance major are required to take 9 hours of foreign language in addition to the Fulbright College core requirement, so that at least 3 hours each of French, German, and Italian are taken.

#### Fall Semester 1
- 3 ENGL 1013 Composition I
- 3 MUTH 1003 Basic Musicianship (if required) or Core from areas a, b, c, or d (as needed)
- 1 MUAC 1221 Piano for Music Majors I (fall only)
- 3 MUAP 1103 Applied Voice/Instrument

#### Spring Semester 1
- 3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013
- 1 MUAC 1121 Italian for Singers
- 1 †‡MUEN Music Ensemble (see adviser)
- 3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013
- 3 Foreign Language

#### Fall Semester 2
- 3 †‡MUTH 2603 Music Theory II (MUTH 1603)
- 1 MUTH 2621 Aural Perception III
- 1 †‡MUAC 2221 Piano for Music Majors III (fall only)
- 2 †‡MUAP 2111/2121 Music Technology I/II
- 3 MUAP 1103 Applied Voice/Instrument
- 1 †‡MUEN Music Ensemble (see adviser)
- 3 MLIT 1003 Music Lecture (for music majors) or WCIV 1003 or WCIV 1013 (as needed)
- 3 Foreign Language

#### Spring Semester 2
- 3 †‡MUTH 3613 Music Theory IV (MUTH 1603, MUTH 2603)
- 3 †‡MUHS 3703 History of Music to 1800 (MLIT 1003, WCIV 1003 and WCIV 1013)
- 3 †‡MUHS 4763 Survey of Vocal Literature I or Core from areas a, b, c, or d (as needed)
- 2 †‡MUAP 3103 Applied Voice/Instrument
- 1 †‡MUEN Music Ensemble (see adviser)
- 1 †‡MUPD 3801 Conducting I
- 3 Core from areas a, b, c, or d (as needed) – Foreign Language recommended if needed

#### Fall Semester 3
- 3 †‡MUTH 3613 Music Theory IV (MUTH 1603, MUTH 2603)
- 1 MUTH 2621 Aural Perception IV
- 3 †‡MUHS 3703 History of Music to 1800 (MLIT 1003, WCIV 1003 and WCIV 1013)
- 3 †‡MUHS 4763 Survey of Vocal Literature I or Core from areas a, b, c, or d (as needed)
- 3 †‡MUAP 3103 Applied Voice/Instrument
- 1 †‡MUEN Music Ensemble (see adviser)
- 1 †‡MUPD 3801 Conducting I
- 3 Core from areas a, b, c, or d (as needed) – Foreign Language recommended if needed

#### Spring Semester 3
- 3 †‡MUTH 4703 Form and Analysis (MUTH 2603)
- 3 †‡MUHS 3713 History of Music 1800-present (MUHS 3703)
- 3 †‡MUHS 4773 Survey of Vocal Literature II or Core from areas a, b, c, or d (as needed)
- 3 MUAP 3102 Applied Voice/Instrument
- 1 †‡MUAP 3201 Recital I
Requirements for a Minor in Music: A minimum of 18 semester hours in music courses, of which at least nine hours must be selected from MUTH, MUHS, and/or MLIT courses, the specific courses to be determined by the student in consultation with a music faculty adviser, the adviser to be appointed by the music faculty on the basis of each student’s particular interests. The student must notify the Department of Music of his/her intent to minor.

For requirements for advanced degrees in music, see the Graduate School Catalog.

SEE PAGES 385-388 FOR MUSIC (MLIT THROUGH MUTH) COURSES

PHILOSOPHY (PHIL)

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Chair of the Department
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Web site: http://www.uark.edu/depts/philinfo/
E-mail: phildept@uark.edu

• Professor Spellman
• Professor Emeritus Nissen
• Associate Professors Adler, Lee, Minar, Senor
• Associate Professor Emeritus Edwards
• Assistant Professors Funkhouser, Lyons, McMullin, Ward

Requirements for a Major in Philosophy: 30 semester hours in philosophy to include PHIL 2003 or PHIL 4253, and PHIL 4003, PHIL 4033, and six hours to be chosen from PHIL 4013, PHIL 4023,

Fall Semester 1
3 †PHIL 2003 Introduction to Philosophy
3 †PHIL 2033 History of Philosophy
3 Core from areas a, b, c, d, e, or f
15 semester hours

Spring Semester 1
3 †PHIL 4003 History of Philosophy
3 †PHIL 4033, PHIL 4063, PHIL 4073, and PHIL 4083.

Writing Requirement: The writing requirement can be satisfied either by completion of an acceptable thesis or by approval of a research/analytical paper from any 4000-level course in philosophy submitted by the student to the Philosophy Department’s Undergraduate Committee.

Requirements for Departmental Honors in Philosophy: The purpose of the honors program is to provide the honors candidate with the opportunity of achieving greater maturity in dealing with philosophical ideas through independent study. The candidate’s plan of study will include the reading of significant philosophical works. Normally a candidate will complete a total of three to six hours of independent readings in philosophy during his or her junior and senior years. In addition, it is recommended that the candidate register for honors courses and colloquia. One colloquium is required.

The candidate will be expected to take 12 hours (which may include 6 hours of thesis) in Honors Studies and to write an essay during his or her senior year and give a satisfactory account of the honors readings and senior essay in an oral examination. Successful completion of the requirements will be recognized by the award of the distinction “Philosophy Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

Requirements for a Combined Major in Philosophy and African-American Studies: 36 semester hours, consisting of 18 hours in philosophy and 18 hours in African-American studies. The philosophy requirement is: 18 semester hours in philosophy to include either 12 hours over 3000 and PHIL 2203 or PHIL 4253, or 15 hours over 3000. The hours over the 3000-level must include at least three hours of value theory to be chosen from PHIL 4113, PHIL 4123, PHIL 4133, or PHIL 4143, and at least six hours in the history of philosophy (PHIL 4003, PHIL 4013, PHIL 4023, PHIL 4033, PHIL 4043, PHIL 4063, PHIL 4073, PHIL 4083) including PHIL 4003 or PHIL 4033. See African-American studies on page 124.

Philosophy Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program as well as page 118 of this chapter for College requirements. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 PHIL 2003 Introduction to Philosophy
3 Core from areas a, b, c, d, e, f, or g
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d, e, f, and g
3 Core from areas a, b, c, d, e, f, and g
3 Core from areas a, b, c, d, e (as needed)
15 semester hours
**Fall Semester 2**
3 †‡ PHIL 4003 Ancient Greek Philosophy
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 General Elective
16 semester hours

**Spring Semester 2**
3 †‡ PHIL 4303 Modern Philosophy
3 †Core from area g (if needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
15 semester hours

**Fall Semester 3**
3 †‡ PHIL course from Philosophy Area Group 1
3 †‡ PHIL 3000-4000 Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

**Spring Semester 3**
3 †‡ PHIL course from History of Philosophy Group 2
3 †Core from area g (if still needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 †Advanced Level Elective
15 semester hours

**Fall Semester 4**
3 †‡ PHIL course from Philosophy Area Group 1
3 †‡ PHIL 3000-4000 Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 General Electives
16 semester hours

**Spring Semester 4**
3 †‡ PHIL course from History of Philosophy Group 2
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced Level Elective
3 †Advanced Level Elective
3 General Elective
15 semester hours

**124 Total Hours**

Philosophy Area Group 1: Students may take any additional upper level course in philosophy, but it is recommended that philosophy majors take at least two of the following:
- PHIL 4113 Social and Political Philosophy
- PHIL 4123 Classical Ethical Theory
- PHIL 4133 Contemporary Ethical Theory
- PHIL 4143 Philosophy of Law
- PHIL 4203 Theory of Knowledge
- PHIL 4213 Philosophy of Science
- PHIL 4303 Philosophy of Religion
- PHIL 4403 Philosophy of Art
- PHIL 4423 Philosophy of Mind
- PHIL 4603 Metaphysics

History of Philosophy Group 2 (does NOT include Ancient Greek

**Philosophy and Modern Philosophy which are both required):**
- Philosophy majors are required to take any two of the following courses:
  - PHIL 4013 Platonism and the Rise of Christian Theology
  - PHIL 4063 Twentieth Century Continental Philosophy
  - PHIL 4023 Medieval Philosophy
  - PHIL 4073 History of Analytic Philosophy
  - PHIL 4043 Nineteenth Century Continental Philosophy
  - PHIL 4083 Existentialism

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter.
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

**Requirements for a Minor in Philosophy:** 18 semester hours in philosophy to include PHIL 2203 or PHIL 4253, and either PHIL 4003 or PHIL 4033. A student may earn either a minor or a combined major in philosophy but not both. A student must notify the department of his or her intent to minor.

For requirements for advanced degrees in philosophy, see the Graduate School Catalog.

SEE PAGE 392 FOR PHILOSOPHY (PHIL) COURSES

**PHYSICS (PHYS)**
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- Distinguished Professors Salamo, Xiao
- Professors Gea-Banacloche, Gupta, Harter, Lacy, Lieber, Pederson, Singh, Thibado, Vyas
- Research Professor Vickers
- Professors Emeriti Chan, Hobson, Hughes, Richardson, Zinke
- Associate Professors Bellaiche, Oliver, Stewart
- Assistant Professors Chakhalian, Fu, Li

**Requirement for B.S. Degree with a Major in Physics:** The student must present a minimum of 40 semester hours in physics including PHYS 2054, PHYS 2074, PHYS 2094, PHYS 3414, PHYS 3614, PHYS 4073, PHYS 4991 and courses in one of five concentrations:

- **Professional:** PHYS 3113, PHYS 4333, and 10 semester hours numbered 3000 and above in physics or astronomy.
- **Optics:** PHYS 3544, any 2 courses selected from PHYS 4734, PHYS 4754, PHYS 4774, and PHYS 4794, and 4 semester hours numbered 3000 and above in physics or astronomy.
- **Electronics:** PHYS 220V (up to 2 hours), PHYS 320V (2 or more hours), PHYS 4333, and 6 semester hours numbered 3000 and above in physics or astronomy.
- **Computational:** PHYS 3113 and 13 semester hours including courses numbered 3000 and above in physics, astronomy, advanced computer science, or mathematics chosen with the adviser’s permission.
- **Biophysics:** PHYS 3113 and 13 semester hours including courses numbered 3000 and above in physics, astronomy, biology, and chemistry chosen with the adviser’s permission.

**For all five of the possible concentrations the following mathematics courses are required:** MATH 2554, MATH 2564, MATH 2574, MATH 3404, and MATH 3423. CSCE 4513, CENG 4423, or
MEEG 2703 can be substituted for MATH 3423 with the adviser’s approval. In addition, CHEM 1103/1101L and CHEM 1123/1121L, or an approved 8 hours of laboratory-based courses in CSCE (CSCE 1113/1111L and CSCE 1123/1121L) or CENG (CENG 1113/1111L and CENG 1123/1121L), or an approved 9 hours of courses in CSCE (CSCE 1113, CSCE 1123, CSCE 2143, CSCE 3313) or CENG (CENG 1113, CENG 1123, CENG 2143, CENG 3313) are required.

Majors must propose participation in a research experience project no later than the end of their junior year of study. A written report of the results must be submitted during Senior Seminar (PHYS 4991).

Physics B.S. Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program as well as page 118 of this chapter for College requirements. Physics offers five concentrations: professional, optics, electronics, computational and biophysics. The eight-semester plan for the biophysics concentration is listed below. Eight-semester plans for the four other concentrations are available in Section 2 of the Catalog of Studies, online at http://catalogofstudies.uark.edu/.

The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Well prepared students may skip BIOL 1543/1L, and go immediately into the biology core courses. Students should consult their advisers.

**Fall Semester 1**

3 ENGL 1013 Composition I
4 BIOL 1543/1541L Principles of Biology
4 ♠MATH 2554 Calculus I
4 ♠PHYS 2054 University Physics I
15 semester hours

**Spring Semester 1**

3 ENGL 1023 Composition II
4 ♠MATH 2564 Calculus II
3 BIOL 2533 Cell Biology or an adviser approved elective
4 ♠PHYS 2074 University Physics II
3 Core from areas a, b, c or e (as needed)
17 semester hours

**Fall Semester 2**

4 ♠PHYS 2094 University Physics III
4 ♠MATH 2574 Calculus III
4 CHEM 1103/1101L University Chemistry I
3 Core from areas a, b, c or e (as needed)
15 semester hours

**Spring Semester 2**

4 ‡PHYS 3614 Modern Physics
4 CHEM 1123/1121L University Chemistry II
4 ‡MATH 3404 Differential Equations
4 ‡BIOL 2013/2011L General Microbiology or an adviser approved elective
16 semester hours

**Fall Semester 3**

4 ‡PHYS 3414 Electromagnetic Theory
3 ‡MATH 3423 Advanced Applied Math I
3 Core from areas a, b, c or e (as needed)

4 ♠CHEM 3603/3601L Organic Chemistry I*
1 BIOL 2001 Bibliographic practicum
15 semester hours

**Spring Semester 3**

3 ‡PHYS 3113 Analytical Mechanics
4 ♠CHEM 3613/3611L Organic Chemistry II*
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
3 ♠Core from area f (if needed) or General Electives
16 semester hours

**Fall Semester 4**

3 ‡PHYS 4073 Introduction to Quantum Mechanics
3 ‡BIOL 4003 Laboratory Techniques in Microbiology*
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
15 semester hours

**Spring Semester 4**

3 ‡BIOL 3323 General Genetics*
3 ‡BIOL 3023 Evolutionary Biology*
1 ‡PHYS 4991 Senior Seminar
3 Core from areas a, b, c or e (as needed)
3 Core from areas a, b, c or e (as needed)
3 ‡Core from area f  (if needed) or General Electives
16 semester hours

**124 Total Hours**

Group A. Variable hours required in consultation with adviser:
PHYS 320V Electronics II
PHYS 306V Projects
PHYS 3544 Optics
PHYS 3923H Honors Colloquium
PHYS 399VH Independent Honors Study
PHYS 4113 Physics in Perspective
PHYS 4213 Physics of Devices
PHYS 4621L Modern Physics Lab
PHYS 4713 Solid State Physics
PHYS 4734 Laser Physics
PHYS 4774 Optical Properties
PHYS 4794 Lightwave Communications
PHYS 4803 Mathematical Physics
PHYS 498V Senior Thesis
ASTR 3033 Solar System Astronomy
ASTR 3053 Stellar Systems
ASTR 4013 Astrophysics

* Any 3000 or 4000 level
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a B.A. Degree with a Major in Physics:
This track is for students desiring a broader program in the arts, sciences, and social sciences while majoring in physics. This program is recommended for pre-medical, journalism, pre-business, pre-law and other students planning careers in fields for which a physics education would be beneficial. For B.A. students seeking teach-
ing licensure, see the Teacher Licensure Requirements below. This program requires a total of 124 semester hours. The student must present 24 semester hours in physics or astronomy, including PHYS 2013/2011L, PHYS 2033/2031L, PHYS 3603/3601L, PHYS 4991, and 11 semester hours chosen from PHYS 220V and/or any physics or astronomy courses at the 3000 level or above. The student must also present MATH 1285 (or MATH 1203 and MATH 1213) and MATH 2554 (or MATH 2043) as well as two additional courses at the 2000 level or above in mathematics or statistics. An additional 9 semester hours at the 3000 level or above must be taken from a single special emphasis area chosen with the adviser’s approval. The special emphasis area may be chosen in any single degree-granting department at the University of Arkansas. For B.A. students seeking teacher licensure, the special emphasis area may involve courses from more than one degree-granting department at the University of Arkansas with the approval of their adviser.

Physics B.A. Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program as well as page 118 of this chapter for College requirements. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

The Physics B.A. program includes requirements for a special emphasis area. In this case, journalism was used as an example. It is recommended that the free electives be chosen in a second science, or in journalism.

Fall Semester 1
3 ENGL 1013 Composition I
3 JOUR 1023 Media and Society* or General Elective
3-5 Begin Math Sequence
3 Core from areas a, b, c, d or e (as needed)
0-3 Core from areas a, b, c, d, e or (as needed) (delayed if 5 hour math is taken)
14-15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 JOUR 1033 Fundamentals of Journalism* or General Elective
3 Continue Math Sequence (if needed) or Core from areas a, b, c, d or e (as needed)
4 BIOL 1543/1541L Principles of Biology, or other biological science core from core area f
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

Fall Semester 2
4 PHYS 2013/2011L College Physics I
3 ENGL 2013* or core g (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Continue Math Sequence (if needed) or †Advanced Level Elective
3 †JOUR 2013 News Reporting I* or General Elective
16 semester hours

Spring Semester 2
4 †PHYS 2033/2031L College Physics II
3 †JOUR 3023 News Reporting II* or other Special Emphasis Area
3 †MATH or STAT elective
3 Core from areas a, b, c, d or e (as needed)

Fall Semester 3
3 †‡PHYS 3603 Introduction to Modern Physics
3 MATH or STAT elective
3 Core from areas a, b, c, d or e (as needed)
3 †‡JOUR 3633 Media Law* or other Special Emphasis Area
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 3
1 †‡PHYS 3601L Modern Physics Lab
3 †‡PHYS 4103 Physics in Perspective, or other PHYS/ASTR Group A
3 †‡JOUR 3013 Editing* or other Special Emphasis Area
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced level elective
16 semester hours

Fall Semester 4
2-4 †‡PHYS/ASTR Group A
3 †‡PHYS/ASTR Group A
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced level elective
3 †Advanced level elective
16 semester hours

Spring Semester 4
3 †‡PHYS 4203 Physics of Devices, or other PHYS/ASTR Group A
1 †‡PHYS 4991 Senior Seminar
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced level elective
3 †Advanced level elective
16 semester hours

124 Total Hours

Group A: Eleven semester hours chosen from:
PHYS 220V Introduction to Electronics or any other PHYS or ASTR classes numbered 3000 or above.

*Required for journalism emphasis.
† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Writing Requirement: Students majoring in physics may satisfy the Fulbright College writing requirement by means of a senior thesis (PHYS 498V), an honors thesis submitted in fulfillment of the requirements of the honors program (PHYS 399VH), or by means of a paper submitted as part of PHYS 4991 or any physics or astronomy course numbered 3000 or above. Students electing the last route must obtain approval of the instructor during the first three weeks of the semester. The research/analytical paper should demonstrate competency in the use of word processing software and also at least one computer analytical tool such as a spreadsheet, mathematical or graphics program, or an original program written by the student.

Assessment of Student Learning: In accordance with state, University, and college requirements, all students must have learning assessed before graduation. Students majoring in physics will be
assessed in the course PHYS 4991, which must be taken in the year prior to graduation.

Requirements for Departmental Honors in Physics: The Departmental Honors Program in Physics provides upper-division undergraduate students with an opportunity to formally participate in scholarly physics activities. Honors candidates carry out independent study and research under the guidance of the physics faculty and participate in special honors classes, seminars, and colloquia. Outstanding student achievement will be recognized by awarding the distinction “Physics Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies. To be considered as a candidate for higher distinctions, however, a student must achieve at least a 3.50 cumulative grade-point average in physics and mathematics. In addition to satisfying the general college requirements for the bachelor’s degree with honors, an honors candidate in physics must

1. become a candidate no later than the first semester of the junior year of study,
2. enroll in honors sections of physics courses when available,
3. enroll in six hours of honors research PHYS 399VH,
4. enroll in at least one physics honors colloquium PHYS 3923H,
5. complete and orally defend an honors thesis based upon the project carried out in PHYS 399VH, and
6. achieve a cumulative grade-point average of 3.125 in physics.

Requirements for a Minor in Physics: Students wishing to obtain a minor in physics must take either PHYS 2013/2011L, PHYS 2033/2031L or PHYS 2054/2050L, PHYS 2074/2070L, plus at least seven additional hours of physics courses numbered 3000 or above. A student must notify the department of his or her intent to minor.

Physics (B.A. or B.S.) Physical/Earth Science Teacher Licensure Requirements:
Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students wanting to teach science in middle school should consult with a middle level adviser in the College of Education and Health Professions.

For information on advanced degrees in physics, see the Graduate School Catalog.

POLITICAL SCIENCE (PLSC)
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Chair of the Department
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Web site: http://www.uark.edu/depts/plscinfo/

• Professors Kelley, Miller, Reid, Shields, Waligorski
• Professors Emeriti Neuse, Savage, Vanneman
• Associate Professors Conge, Ghadian, Kerr, Parry, Ryan, Schreckhise
• Associate Professor Emeritus Tweraser
• Assistant Professors Dowdle, Hansen, Zeng
• Assistant Professor Emeritus Elston

Requirements for B.A. Degree with a Major in Political Science:

30 semester hours at least 21 of which must be above 3000.
1. Students are required to take both PLSC 2003 American National Government and PLSC 2013 Intro. to Comparative Politics.
2. Students must choose one of the following:
   PLSC 2813 Intro. to International Relations
   PLSC 3103 Intro. to Public Administration
   PLSC 3963 Modern European Political Thought
3. Students fulfill the remaining requirements from among any of the available political science courses. The only stipulation is that at least 21 hours must be in the 3000-4000 level.

American Politics
PLSC 2003, PLSC 3203, PLSC 3223, PLSC 3243, PLSC 3253, PLSC 4203, PLSC 4213, PLSC 4223, PLSC 4243, PLSC 4253, PLSC 4263, PLSC 4273, PLSC 4283, PLSC 4373

Comparative Politics
PLSC 3503, PLSC 3523, PLSC 3553, PLSC 3573, PLSC 4503, PLSC 4513, PLSC 4543, PLSC 4563, PLSC 4573, PLSC 4583, PLSC 4593

International Politics
PLSC 3803, PLSC 3813, PLSC 3823, PLSC 3853, PLSC 4803, PLSC 4843, PLSC 4873

Political Theory
PLSC 3603, PLSC 3913, PLSC 3933, PLSC 3953, PLSC 3963, PLSC 3973, PLSC 3983, PLSC 4503, PLSC 4903, PLSC 4923

Public Administration
PLSC 3103, PLSC 3113, PLSC 3153, PLSC 4193

Writing Requirement: The college writing requirement is fulfilled by submitting an acceptable research/analytical paper to the department for approval at least four weeks prior to graduation. The paper may be derived from completion of an honors essay (PLSC 499VH), a senior thesis (PLSC 498V), or some other advanced course in political science. The student is urged to consult with his or her faculty adviser no later than early in the first semester of the senior year.

Requirements for Departmental Honors in Political Science:
The Departmental Honors Program in Political Science offers junior and senior students the opportunity to enroll in enriched and advanced courses and to do independent research in their senior year. Honors candidates are eligible for honors colloquia, honors courses, some advanced seminars, and an independent studies project, usually in close collaboration with one or more members of the faculty.

In addition to satisfying the general college honors requirements for the bachelor’s degree, honors candidates in political science must successfully complete at least 12 hours of honors work. Six of the 12 hours will be senior essay credit (PLSC 499VH) and will be taken during the senior year. Successful completion and defense of senior essay or thesis is a major part of the Political Science Honors Program, and students should begin discussing it with the Honors Adviser during their junior year. The preferred methods for satisfying the remaining six hours is to enroll in an honors colloquium (3923H) in political science or another department, by enrolling in a graduate seminar in political science, or by enrolling in PLSC 399VH (honors course).

Under exceptional circumstances, students may satisfy honors requirements by enrolling in PLSC 394V, by enrolling in honors sections in other departments, or by enrolling in colloquia or graduate seminars in other departments, each of which requires approval by the department chairperson. Successful completion of the requirements will be recognized by the award of the distinction “Political Science Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies. For full details consult the chairperson of the political science department.

Political Science Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program as well as page 118 of this chapter for College requirements. The following eight-semester plan refers to additional BA Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.
Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 PLSC 2003 American Nat’l. Government or Core from areas a, b, c, d, or e
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †MATH 2043, 2053, 2183 or Core from areas a, b, c, or d (as needed)
3 PLSC 2013 Intro to Comparative Politics or PLSC 2003 (if not taken earlier)
3 PLSC course from Requirement 2 above or Core from areas a, b, c, d, or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 2
3 PLSC course from Requirement 2 above or Core from areas a, b, c, or d (as needed)
3 PLSC 2013 (if not taken earlier) or †‡PLSC Elective
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
15 semester hours

Spring Semester 2
3 †Core from area g (if required) or †Advanced Level Elective
3 PLSC course from Requirement 2 (if not taken) or †‡PLSC Elective
3 Core from areas a, b, c, d, or e (as needed) or PLSC course from Requirement 1 (if not taken earlier)
3 Core from areas a, b, c, d, or e (as needed)
3 General Elective
15 semester hours

Fall Semester 3
3 †‡PLSC Elective
3 †‡PLSC Elective
3 †Core from area g (if required) or †Advanced Level Elective
3 Core from areas a, b, c, d, or e (as needed)
4 Core from area f
16 semester hours

Spring Semester 3
3 †‡PLSC Elective
3 †‡PLSC Elective
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 †‡PLSC Elective
3 †‡PLSC Elective or †‡Upper Level ARSC course (as needed)
3 Core from areas a, b, c, d, or e (as needed)
3 Core from areas a, b, c, d, or e (as needed)
3 †Advanced Level Elective
1 General Elective
16 semester hours

Spring Semester 4
3 †‡PLSC Elective or General Elective
3 †‡Upper Level ARSC course (as needed) or General Elective
3 †Advanced Level Elective
3 †Advanced Level Elective
3 General Elective
5 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Political Science (B.A.) Social Studies Teaching Licensure Requirements:
Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.

Students wanting to teach social studies in middle school should consult with a middle level adviser in the College of Education and Health Professions.

Combined Majors

Political Science and African-American Studies: For the requirements for a combined major in political science and African-American studies, see page 124.

Political Science and Journalism: The combined major in political science and journalism is recommended for those students who have a strong interest in the reporting of public affairs as a career. The political science requirement may be satisfied by 24 semester hours of courses including PLSC 2003, PLSC 2013, PLSC 4373, and 15 additional hours of advanced political science courses elected from one or the other of two field concentrations. Those wishing to emphasize American political affairs may elect the additional hours from the following:

PLSC 3103  PLSC 3113  PLSC 3153  PLSC 3183
PLSC 3203  PLSC 3223  PLSC 3243  PLSC 3253
PLSC 3603  PLSC 3853  PLSC 3923H  PLSC 3913
PLSC 3933  PLSC 394V  PLSC 3973  PLSC 3983
PLSC 399VH  PLSC 4193  PLSC 4203  PLSC 4213
PLSC 4223  PLSC 4243  PLSC 4253  PLSC 4263
PLSC 4273  PLSC 4903

Alternatively, a foreign affairs concentration may be pursued by electing the advanced hours from the following courses:

PLSC 3503  PLSC 3523  PLSC 3533  PLSC 3553
PLSC 3573  PLSC 3603  PLSC 3803  PLSC 3813
PLSC 3823  PLSC 3853  PLSC 3923H  PLSC 394V
PLSC 3953  PLSC 3963  PLSC 3973  PLSC 3983
PLSC 399VH  PLSC 4273  PLSC 4503  PLSC 4513
PLSC 4543  PLSC 4563  PLSC 4573  PLSC 4803
PLSC 4583  PLSC 4593  PLSC 4803  PLSC 4813
PLSC 4823  PLSC 4843  PLSC 4873

For the eight-semester program plan or the journalism requirements, see the combined major in Journalism and Political Science on page 169. Students should consult with their adviser in each department.

Political Science and Latin American Studies: For the requirements for a combined major in political science and Latin American studies, see page 170.

Requirements for a Minor in Political Science: 18 hours including PLSC 2003 or PLSC 2013. At least 9 of these hours must be in courses numbered 3000 or above, and courses must be chosen from at least two of the five political science fields. Students should consult with...
an adviser in the department for the selection of appropriate courses.

**Minor in Legal Studies:** This minor will introduce undergraduate students to the study and application of law by taking law-related courses in a number of disciplines. It provides a focus for students who are interested in the law, whose careers will require a measure of legal knowledge, or for those considering entering law school.

**Requirements for a Minor in Legal Studies:** 18 semester hours to include the following:

- PLSC 3243, and either PLSC 4253 or PLSC 4263
- 12 hours chosen from the following:
  - COMM 4113
  - JOUR 3633
  - PHIL 4143
  - CMJS 3003
  - CMJS 3503
  - PLSC 3813
  - PLSC 4193
  - SCWK 3533
  - ARCH 5323
  - BLAW 3033
  - BLAW 3043
  - AGEC 3503
  - INEG 3113
  - OMGT 4313
  - FDSC 3202

Students should consult with their advisers each semester.

For requirements for the M.A. degree in political science, the M.P.A degree, or the combined J.D./M.P.A. degree, see the **Graduate School Catalog**.

SEE PAGE 395 FOR POLITICAL SCIENCE (PLSC) COURSES.

**Public Administration**

The degree in public administration is designed to prepare students for career positions with local, state, or federal government agencies, labor organizations, non-governmental organizations and other groups. These organizations are constantly in need of able people thoroughly trained in the principles of public administration and management, government budgeting, economic planning, and economic research.

The B.S.P.A is a flexible liberal arts degree with some courses in business administration. This flexibility results from the opportunity to take junior-senior electives from business, economics, or political science. The B.S.P.A adviser can assist in structuring a personalized degree plan to enhance a student's future academic or professional options.

**Requirements for a B.S. Degree with a Major in Public Administration:** 30 semester hours, at least 21 of which must be above 3000. The student must complete the following 18 hours of core courses:

- STAT 2303 or another data analysis course approved by the BSPA Advisor
- ECON 2013, PLSC 2003, PLSC 3103, PLSC 4193, PLSC 4283

An additional 12 hours of junior or senior electives in business administration or economics or political science (selected with the consent of the BSPA adviser) must be completed. (See also pre-business core requirements and selected WCOB minors in this catalog.) 18 hours of science and math are required to include at least 12 hours laboratory natural sciences and 6 hours of math (MATH 2053 or higher is recommended).

**Public Administration Eight-Semester Degree Program**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.S. Core Requirement Areas (areas a, b, c, d, e, and f) found on page 197 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**Fall Semester 1**

- 3 ENGL 1013 Composition I
- 3-4 MATH 1203 (If required) or †MATH 2043, 2053, or 2554
- 3 PLSC 2003 American Nat’l. Government (counts in core area a)
- 3 Core from areas a, b, or c (as needed)

**Spring Semester 1**

- 3 ENGL 1023 Composition II
- 3-4 †MATH 2043, 2053, or 2554 (as needed)
- 3 STAT 2303 Principles of Statistics or Approved Alternative
- 3 Core from areas a, b, or c (as needed)
- 3 General Elective
- 15-16 semester hours

**Fall Semester 2**

- 3 †PLSC 3103 Public Administration
- 3 †ECON 2013 Principles of Macroeconomics (counts in core area e)
- 3 Core from areas a, b, or c (as needed)
- 4 Core from area d, shown below (as needed)
- 3 General Elective
- 16 semester hours

**Spring Semester 2**

- 3 †Core group f (if required) or †Advanced Level Elective
- 3 †PADM Junior-Senior Elective (as needed)
- 3 †PLSC 4193 Administrative Law or †‡PLSC 4283 Federalism and Intergov’t Relations
- 3 Core from areas a, b, or c (as needed)
- 4 Core from area d, shown below (as needed)
- 3 †Advanced Level Elective
- 16 semester hours

**Fall Semester 3**

- 3 †PADM Junior-Senior Elective (as needed)
- 3 †‡Upper Level Fulbright College course
- 3 Core from areas a, b, or c (as needed)
- 3 General Elective
- 15 semester hours

**Spring Semester 3**

- 3 †PADM Junior-Senior Elective (as needed)
- 3 †‡Upper Level Fulbright College course
- 3 Core from areas a, b, or c (as needed)
- 3 General Elective
- 15 semester hours

**Fall Semester 4**

- 3 †PADM Junior-Senior Elective (as needed)
- 3 †Advanced Level Elective
- 3 Core from areas a, b, or c (as needed)
- 3 General Elective
- 4 General Electives
- 16 semester hours

**Spring Semester 4**

- 3 †Upper Level Fulbright College course or General Elective
- 3 †Advanced Level Elective
- 3 General Elective
- 3 General Elective
- 15 semester hours

**124 Total Hours**

Core area d: Natural Sciences: 12 hours to be chosen from the following:
Students who want to pursue graduate training in psychology are required to complete and orally defend an honors thesis based upon the independent study carried out in PSYC 399VH. PSYC 399VH may be taken for 1 to 6 hours of credit each semester and repeated for a maximum of 12 hours. Nine hours are ordinarily needed to complete the research project and to prepare the honors thesis.

Requirements for Departmental Honors in Psychology: The Departmental Honors Program in Psychology provides upper-division undergraduate students with an opportunity to formally participate in scholarly psychology activities. Honors candidates carry out independent study and research under the guidance of the psychology faculty and participate in special honors classes, seminars, and colloquia. Outstanding student achievement will be recognized by awarding the distinction “Psychology Scholar Cum Laude” at graduation. In addition to satisfying the general college honors requirements, honors candidates in psychology are required to complete and orally defend an honors thesis based upon the independent study carried out in PSYC 399VH.

Writing Requirement: Students majoring in psychology will satisfy the Fulbright College writing requirement by successful completion of PSYC 3083, PSYC 3183, PSYC 3283, PSYC 3383, PSYC 3483, PSYC 3583, PSYC 3683, or PSYC 3783, each of which requires a final research paper.

Requirements for Departmental Honors in Psychology: The Departmental Honors Program in Psychology provides upper-division undergraduate students with an opportunity to formally participate in scholarly psychology activities. Honors candidates carry out independent study and research under the guidance of the psychology faculty and participate in special honors classes, seminars, and colloquia. Outstanding student achievement will be recognized by awarding the distinction “Psychology Scholar Cum Laude” at graduation. In addition to satisfying the general college honors requirements, honors candidates in psychology are required to complete and orally defend an honors thesis based upon the independent study carried out in PSYC 399VH.

Writing Requirement: Students majoring in psychology will satisfy the Fulbright College writing requirement by successful completion of PSYC 3083, PSYC 3183, PSYC 3283, PSYC 3383, PSYC 3483, PSYC 3583, PSYC 3683, or PSYC 3783, each of which requires a final research paper.
3 ‡‡PSYC 3073 Research Methods or †PSYC 2013 (if not taken earlier)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15 semester hours

Spring Semester 2
3 †Core from area g (if still needed) or †Advanced Level Elective
3 ‡‡PSYC 3073 Research Methods or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed) or †‡PSYC from Group A or B
3 Core from areas a, b, c, d or e (as needed)
3 General Elective
15 semester hours

Fall Semester 3
3 ‡‡PSYC course from Group A or B
3 ‡‡PSYC from Research Group or ‡‡PSYC 3073 or General Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Spring Semester 3
3 ‡‡PSYC course from Group A or B
3 †Core from area g (if still needed) or †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡‡PSYC course from Group A or B or ‡‡ PSYC Research Group (as needed)
3 ‡‡PSYC course from Group A or B (if needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced Level Elective
1 General Elective
16 semester hours

Spring Semester 4
3 ‡‡PSYC 3000-4000 Level Elective or ‡‡PSYC Research Group (as needed)
3 ‡‡PSYC 3000-4000 Level Elective or ‡‡PSYC Research Group (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced Level Elective
3 General Elective
15 semester hours

124 Total Hours

Group A: Six hours required
PSYC 3013 Social Psychology
PSYC 3023 Abnormal Psychology
PSYC 4063 Psychology of Personality
PSYC 4053 Psychological Tests
PSYC 3033 Infancy and Early Childhood (PSYC 2003) or PSYC 3093 Childhood and Adolescence (PSYC 2003) (Both can be taken if 9 hours are completed from Group A)

Group B: Six hours required
PSYC 3103 Cognitive Psychology
PSYC 4073 Psychology of Learning
PSYC 4123 Perception
PSYC 4143 History and Systems of Psychology
PSYC 4183 Physiological Psychology
PSYC 4193 Comparative Psychology

PSYC Research Group: Three hours required
PSYC 3083 Research in Applied Psychology
PSYC 3183 Research in Human Learning
PSYC 3283 Research in Social Psychology
PSYC 3383 Research in Developmental Psychology
PSYC 3483 Research in Physiological Psychology
PSYC 3583 Research in Personality
PSYC 3683 Research in Perception
PSYC 3783 Research in Cognition

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

Requirements for a Minor in Psychology: Minimum of 18 hours including PSYC 2003, PSYC 2013, and PSYC 3073. A maximum of three hours of 306V can be counted toward meeting the minor requirement. A student must notify the department of his or her intent to minor.

Psychology (B.A.) Teacher Licensure in Social Studies
Requirements:
Please refer to the Secondary Education Requirements for Fulbright College Students on page 114.
Students wanting to teach social studies in middle school should consult with a middle level adviser in the College of Education and Health Professions.
For requirements for advanced degrees in psychology, see the Graduate School Catalog.

SEE PAGE 398 FOR PSYCHOLOGY (PSYC) COURSES

RELIGIOUS STUDIES (RLST)

Vincent J. Cornell
Chair of Studies
202 Old Main
479-575-4157
Web site: http://cavern.uark.edu/depts/h2p/index.html
E-mail: mest@uark.edu

• Professors Cornell (V.), Engels, King, Levine, Montgomery, Schneider, Spellman, Tsai
• Associate Professors Adler, Chappell, Coon, Finlay, Ghadbian, Senor, Tucker, Worden
• Assistant Professors D’Alisera, Erickson, Schweiger
• Research Associate Professor Cornell (R.)
• Research Assistant Professor Halman (H.)

Drawing on faculty from the humanities and social sciences, this minor introduces students to the interdisciplinary and comparative study of religion.

Program Requirements: Students must complete 15 credit hours of regular courses listed below or special topics and seminars found in each semester’s Schedule of Classes under Religious Studies. Of these 15 hours, 3 hours must include HUMN 2213 World Religions.
Students also must choose ONE of the following gateway options:
- ANTH 3123 Anthropology of Religion
- HUMN 3203 Approaches to Religious Studies, or
- PHIL 4303 Philosophy of Religion

A maximum of six hours may be presented from courses taken in the student’s major department.

- ANTH 3123 The Anthropology of Religion
- ANTH 3213 Indians of North America
- ANTH 3263 Indians of Arkansas and the South
- ANTH 4513 African Religions: Gods, Witches, Ancestors

CLST 4003H “Greek Religion” or “Greek Sacred Space” or “Roman Religions”

- ENGL 3623 The Bible as Literature
- GREK 2003 Greek New Testament
- HIST 3003 History of Christianity
- HIST 3033 Islamic Civilization
- HIST 3083 Women and Christianity
- HIST 3263 History of the American Indian
- HIST 3923H Honors Colloquium: Sufism

The Russian studies program focuses on the pre-Revolutionary period prior to 1917, on the communist period from 1917 to 1991, and on the post-communist period from 1991 onward. The geographic focus includes Russia, the other successor states that have emerged from the breakup of the Soviet Union, and East Europe.

Students wishing to maximize their knowledge of Russia and the other successor states and wishing to prepare for graduate training and/or employment in the private sector or government in positions related to the area may earn a combined major in Russian studies together with their major in another discipline. Students are required to coordinate their academic programs both with their advisers in the major department and with the Chairman of the Russian studies program. New students entering the program are required to notify both the major adviser and the chairman of studies of their intention to participate. Freshmen and sophomores considering this program are advised to begin their study of Russian as early as possible.

**Language Requirement:** The student must complete the equivalent of a third year of Russian language training such as RUSS 3013 and RUSS 3023. Students are strongly encouraged to obtain at least a portion of this training in an intensive summer or semester program which provides concentrated instruction beyond the conventional class experience.

**Russian Studies Colloquium:** The student must complete at least three hours in the Russian Studies Colloquium (RSST 4003). The Colloquium may be repeated with a change of subject for a maximum of six credits, with the three additional credits counted as non-departmental electives within the program.

**Electives:** The student must complete at least 18 hours in addition to the language requirement and the Colloquium, in courses with specific content related to Russian studies, or in individualized courses under faculty participating in the program. Students choosing to take individualized reading or directed research courses as a part of the RSST program must obtain the approval of the chairman of studies and their major adviser.

The following conditions apply to the selection of Russian studies electives:

1. courses must be selected from at least three separate departments;
2. a maximum of nine hours may be submitted from courses taken in any one department; and
3. a maximum of nine hours may be submitted from courses taken in the student’s major department.

The following courses may be taken in fulfillment of elective requirements:

**Foreign Language**

- RUSS 4123 Survey of Russian Literature from its Beginnings to the 1917 Revolution
- RUSS 4133 Survey of Russian Literature
- RUSS 475V Special Investigations

**History**

- HIST 4283 Russia to 1861
- HIST 4293 Russia Since 1861

**Political Science**

- PLSC 394V Readings in Political Science
- PLSC 4513 Creating Democracies
- PLSC 4543 Government & Politics of Eastern Europe
- PLSC 4563 Government & Politics of Russia
- PLSC 4813 Politics of the Cold War
- PLSC 5563 Russian and Soviet Political System

**Social Work (SCWK)**

- Joe Schriver
  Director of the School of Social Work
- Melody Greer
  Undergraduate Coordinator
  106 ASUP
  479-575-5039
  Web site: http://socialwork.uark.edu/

- Professors King, Schriver
Enrollment in SCWK 399VH takes place after the student has done supplementing the student's regular departmental academic program. This is a serious long-term undertaking that should have direct value in data collection and analysis is preferred. In any case, the honors work or a policy analysis project. A research study that requires original project, a social work intervention project to be conducted in the field, background reading. The honors thesis may entail a library research Studies. In developing the project, students are encouraged to take the goals of an honors project and to develop it to completion. They work. Students work closely with an adviser of their choice to define the course of study with an independent investigation on a topic in social work.

### Requirements for a Major in Social Work

#### 45 semester hours of social work courses including:

- SCWK 2133 Intro. to Social Work
- SCWK 3193 Human Diversity and Social Work
- SCWK 4073 Social Work Research and Technology I
- SCWK 4093 Human Behavior and the Social Environment I
- SCWK 4103 Human Behavior and the Social Environment II
- SCWK 4153 Social Welfare Policy
- SCWK 4333 Social Work Practice I
- SCWK 4343 Social Work Practice II
- SCWK 4412 Field Seminar I
- SCWK 4422 Field Seminar II
- SCWK 4434 Social Work Internship I
- SCWK 4444 Social Work Internship II
- SCWK 4733 Social Work Practice III
- Social Work electives – 6 hours

Students must adhere to requirements cited for each social work course. A grade of ‘C’ or better must be earned in all core social work courses. If a student receives a grade of ‘D’ in a core social work course, the course must be retaken with a grade of ‘C’ or better prior to taking the course for which that course serves as a prerequisite.

The following social science and general education courses are also required as part of the social work curriculum:

- PLSC 2003 American National Government
- SOCI 2013 General Sociology
- BIOL 1543/1541L Principles of Biology or ANTH 1013-1011L
- Introduction to Biological Anthropology and Lab
- COMM 1313 Fundamentals of Communication
- PSYC 2003 General Psychology

Statistics course, 3 hours

In addition, six hours of upper-level (3000-4000) social science electives, to be selected from SOCI, PSYC, ANTH, GNST, PLSC, COMM, GEOS, ASST, or HESC complete the degree requirements.

#### Writing Requirement:

Social work students complete the research/analytical writing requirement by submitting the research paper from SCWK 4073 or honors paper to the social work faculty for approval.

### Requirements for Departmental Honors in Social Work

The Departmental Honors Program in Social Work is an upper-division course of study with an independent investigation on a topic in social work. Students work closely with an adviser of their choice to define the goals of an honors project and to develop it to completion. They must take 12 hours (which may include 6 hours of thesis) in Honors Studies. In developing the project, students are encouraged to take honors courses, participate in honors colloquia, and do extensive background reading. The honors thesis may entail a library research project, a social work intervention project to be conducted in the field, or a policy analysis project. A research study that requires original data collection and analysis is preferred. In any case, the honors work is a serious long-term undertaking that should have direct value in supplementing the student’s regular departmental academic program. Enrollment in SCWK 399VH takes place after the student has done background reading and has actually begun a project. Students normally enroll in this course for three hours of credit. The course may be repeated for an additional 3 hours of credit if the student’s project is an extensive one. Regardless of the type of project, it is presented in written form and defended at an oral examination before an Honors Council Committee. Projects of extraordinarily high quality may be designated High Honors by the Committee. Successful completion of the requirements will be recognized by the award of the distinction “Social Work Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

### Social Work Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional BA Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

#### Fall Semester 1

- 3 ENGL 1013 Composition I
- 3-4 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
- 3 PLSC 2003 or PSYC 2003 or SOCI 2013
- 3 Core from areas a, b, c or d (as needed)
- 3 Core from areas a, b, c or d (as needed)
- 15-16 semester hours

#### Spring Semester 1

- 3 ENGL 1023 Composition II
- 3 †MATH 2043, 2053, 2183 or Core from areas a, b, c or d (as needed)
- 4 BIOL 1543/1541L or Core from area f (as needed)
- 3 PLSC 2003 or PSYC 2003 or SOCI 2013
- 3 Core from areas a, b, c or d (as needed)
- 16 semester hours

#### Fall Semester 2

- 3 PLSC 2003 or PSYC 2003 or SOCI 2013
- 4 BIOL 1543/1541L or Core from area f (as needed)
- 3 Core from areas a, b, c or d (as needed)
- 3 Core from areas a, b, c or d (as needed)
- 3 Core from areas a, b, c or d (as needed)
- 16 semester hours

#### Spring Semester 2

- 3 †Core from area g or †Advanced Level Elective
- 3 †SCWK 2133 Introduction to Social Work
- 3 ††SCWK 3193 Human Diversity
- 3 Core from areas a, b, c or d (as needed)
- 3 Core from areas a, b, c or d (as needed)
- 15 semester hours

#### Fall Semester 3

- 3 ††SCWK 4093 Human Behavior and Social Environment I
- 3 ††SCWK 4153 Social Welfare Policy
- 3-4 Statistics (SOCI, PSYC, STAT, etc) (4 Hours if SOCI)
- 3 Core from areas a, b, c or d (as needed)
- 3 Core from areas a, b, c or d (as needed)
- 15-16 semester hours

#### Spring Semester 3

- 3 ††SCWK 4073 Social Work Research and Technology
Sociology (SOCI)

A Bachelor of Arts (B.A.) degree in sociology is useful preparation not only for graduate work in sociology, but also for pre-professional training in other fields, such as medicine, law, human services, or related work in the government.

Requirements for B.A. Degree with a Major in Sociology: 31 semester hours, to include SOCI 2013, SOCI 3193, SOCI 3223, SOCI 3301L, SOCI 3303, SOCI 3313, SOCI 4023, SOCI 4043, and 9 hours from sociology 3000- and 4000-level electives.

Writing Requirement: To fulfill the Fulbright College writing requirement, each sociology major will submit, prior to graduation, a substantial research or analytical paper, with a grade of “A” or “B” from an upper-division sociology course (3000-, 4000-, or 5000-level) to their departmental adviser. Satisfactory completion of an honors project or a senior thesis may fulfill this requirement.

Requirements for Departmental Honors in Sociology: The Departmental Honors Program in Sociology is an upper-division course of study based on independent investigation on a scholarly topic of sociological interest. To be eligible for sociology honors candidacy, students normally will have completed 28 semester hours and not more than 85 semester hours with a minimum cumulative grade-point average of 3.25. They must take 12 hours in Honors Studies, which may include 6 hours of thesis. In the junior year, three hours of directed reading, planning, or other work on a research problem should be selected from the following courses:

- SOCI 399VH Honors Course
- SOCI 403V Individual Study in Sociology
- SOCI 4043 Seminar in Sociology.

In the senior year, the student will complete an honors project for up to six hours of credit in SOCI 399VH Honors Course. This honors research project will normally consist of an empirical investigation but may, with the approval of the honors director and the other departmental representatives, be intensive library research on a topic. All candidates must pass an oral examination given by an Honors Council Committee. Successful completion of the requirements will be recognized by the award of the distinction “Sociology Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

Sociology Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1

- 3 ENGL 1013 Composition I
- 3-4 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
- 3 SOCI 2013 General Sociology or Core from areas a, b, c, d or e (as needed)
- 3 Core from areas a, b, c, d or e (as needed)
- 3 Core from areas a, b, c, d or e (as needed)
- 16-17 semester hours

Spring Semester 1

- 3 ENGL 1023 Composition II
- 3-4 †MATH 2043, 2053, 2183, 2554 or Core from areas a, b, c, d or e (as needed)
- 3 SOCI 2013 General Sociology (if still needed) or Core from areas a, b, c, d or e (as needed)
- 4 Core from area f (as needed)
- 3 General Elective
- 16-17 semester hours

Fall Semester 2

- 4 †SOCI 3303 & 3301L Social Data Analysis and Lab
- 3 Core from areas a, b, c, d or e (as needed)
- 3 Core from areas a, b, c, d or e (as needed)

University of Arkansas, Fayetteville
Combined Major in Sociology and Anthropology:

19 semester hours in sociology to include SOCI 2013, SOCI 3303, one course from CMJS 3003, CMJS 3503. Nine hours to complete the 31-semester-hour requirement from 3000- and 4000-level criminal justice or sociology courses not taken above.

For transfer students, a minimum of 18 hours of coursework in the core area to be taken during the last 24 semester hours to be completed at the University of Arkansas, Fayetteville.

Requirements for Departmental Honors in Criminal Justice:

- To be eligible for criminal justice honors candidacy, students normally will have completed 28 semester hours and not more than 85 semester hours with a minimum cumulative grade-point average of 3.25. They must take 12 hours (which may include 6 hours of thesis) in Honors Studies. The honors project may be an intensive study of a topic in criminal justice or an empirical research investigation. The candidate is expected to pass an oral examination given by an Honors Council Committee. Projects of extraordinarily high quality may be designated High Honors by the Committee. Successful completion of the requirements will be recognized by the award of the distinction “Criminal Justice Scholar Cum Laude” at graduation. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the whole of the candidate’s program of honors studies.

For a combined major in sociology and African-American studies, see page 124.

For requirements for an M.A. degree in sociology, see the Graduate School Catalog.

J. William Fulbright College of Arts and Sciences

Graduate School Catalog.
Criminal Justice Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The following eight-semester plan refers to additional B.A. Core Requirement Areas (areas a, b, c, d, e, f, and g) found on page 194 at the end of this chapter. Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

Fall Semester 1
3 ENGL 1013 Composition I
3-4 MATH 1203 (If required) or †MATH 2043, 2053, 2183 or 2554
3 SOCI 2013 General Sociology or Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
15-16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3-4 †MATH 2043, 2053, 2183 or 2554 or Core from areas a, b, c, d or e (as needed)
3 SOCI 2013 General Sociology (if still needed) or Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
3 Core from areas a, b, c, d or e (as needed)
16-17 semester hours

Fall Semester 2
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 CMJS 2003 Intro to CMJS
15 semester hours

Spring Semester 2
3 †Core from area g (if needed) or †Advanced Level Elective
3 ‡‡CMJS 3043 The Police and Society
3 ‡‡CMJS/SOCI 3023 Criminology
3 Core from areas a, b, c, d or e (as needed)
4 Core from area f (as needed)
16 semester hours

Fall Semester 3
4 ‡‡SOCI 3303/3301L Social Data and Analysis/Lab
3 ‡‡CMJS/SOCI 3203 Corrections
3 †Advanced Level Elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
16 semester hours

Spring Semester 3
3 ‡‡ SOCI 3313 Social Research
3 ‡‡CMJS 3003 Criminal Law and Society or ‡‡CMJS 3503 Criminal Procedures
3 Core from areas a, b, c, d or e (as needed)
3 †Core from area g (if still needed) or †Advanced Level Elective
4 Core from area f (as needed)
16 semester hours

Fall Semester 4
3 ‡‡CMJS/SOCI 3000-4000 elective
3 Core from areas a, b, c, d or e (as needed)
3 Core from areas a, b, c, d or e (as needed)
3 †Advanced Level Elective
3 General Elective
15 semester hours

Spring Semester 4
3 ‡‡CMJS/SOCI 3000-4000 elective
3 ‡‡CMJS/SOCI 3000-4000 elective
3 General Elective
3 General Elective
3 General Elective
15 semester hours

124 Total Hours

† Meets 40-hour advanced credit hour requirement. See College Academic Regulations on page 118 of this chapter
‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations on page 118 of this chapter.

SEE PAGE 334 FOR CRIMINAL JUSTICE (CMJS) COURSES
### Additional Fulbright College BA Core Requirement Areas

<table>
<thead>
<tr>
<th>Core Area</th>
<th>Hours</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Communication</td>
<td>3</td>
<td>COMM 1313 Fundamentals of Communication</td>
</tr>
<tr>
<td>b. US History/ American National Government and Western Civilization</td>
<td>9</td>
<td><strong>U.S. History/American National Government</strong> - 3 hours from:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST 2003 History of the American People to 1877 or HIST 2013 History of the American People from 1877 or PLSC 2003 American National Government</td>
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<td></td>
<td></td>
<td><strong>Western Civilization</strong> - 6 hours from:</td>
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<tr>
<td></td>
<td></td>
<td>WCIV 1003 Western Civilization I and WCIV 1013 Western Civilization II or HIST 1113 World Civilizations I and HIST 1123 World Civilizations II</td>
</tr>
<tr>
<td>c. Foreign Language</td>
<td>Up to 12</td>
<td>Completion through the Intermediate II (2013) level in a single language (Includes course numbers 1003*, 1013, 2003, 2013) * 1003 is non-degree credit unless student completed two years in a single foreign language and takes 1003 in a different language. <strong>Students under this plan must begin with a degree-credit course in foreign language.</strong></td>
</tr>
<tr>
<td>d. Fine Arts/ World Literature/ Philosophy</td>
<td>15</td>
<td>Fine Arts - 6 hours from two areas:</td>
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<tr>
<td></td>
<td></td>
<td>ARCH 1003 Architecture Lecture or LARC 1003 Landscape Architecture</td>
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<td></td>
<td></td>
<td>ARHS 1003 Art History or ARTS 1003 Art Studio (not core credit for art majors)</td>
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<td></td>
<td></td>
<td>COMM 1003 Film Lecture</td>
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<td>DANC 1003 Movement and Dance</td>
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<td></td>
<td></td>
<td>DRAM 1003 Theater Lecture (not core credit for drama majors)</td>
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<td></td>
<td></td>
<td>HUMN 1003 Introduction to the Arts and Aesthetics</td>
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<td></td>
<td>MLIT 1003 Music Lecture</td>
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<td></td>
<td></td>
<td>World Literature – 6 hours to include:</td>
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<tr>
<td></td>
<td></td>
<td>WLIT 1113 World Literature I and either WLIT 1123 World Literature II OR a) a foreign language literature course</td>
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<td></td>
<td></td>
<td>b) any other WLIT course</td>
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<td></td>
<td></td>
<td>c) CLST 1003 Classical Studies: Greece or CLST 1013 Classical Studies: Rome</td>
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<tr>
<td></td>
<td></td>
<td>Philosophy – 3 hours from:</td>
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<td></td>
<td></td>
<td>PHIL 2003 Introduction to Philosophy or PHIL 2103 Introduction to Ethics</td>
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<tr>
<td>e. Social Sciences</td>
<td>6</td>
<td>ANTH 1023 Introduction to Cultural Anthropology</td>
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<td></td>
<td></td>
<td>ECON 2013 Principles of Macroeconomics or ECON 2143 Basic Economics</td>
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<td></td>
<td></td>
<td>GEOG 2103 Emerging Nations or GEOG 2203 Developed Nations</td>
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<td></td>
<td></td>
<td>PLSC 2013 Introduction to Comparative Politics</td>
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<td></td>
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<td>PSYC 2003 General Psychology</td>
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<td></td>
<td></td>
<td>SOCI 2013 General Sociology or SOCI 2033 Social Problems</td>
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<tr>
<td>f. Natural Sciences</td>
<td>12 hours total with at least 4 hours of Biological Sciences and 4 hours of Physical Sciences</td>
<td>Biological Sciences</td>
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<tr>
<td></td>
<td></td>
<td>ANTH 1011L/1013 Biological Anthropology</td>
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<tr>
<td></td>
<td></td>
<td>BIOL 1541L/1543 Principles of Biology</td>
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<td></td>
<td></td>
<td>BIOL 1611L/1613 Plant Biology</td>
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<tr>
<td></td>
<td></td>
<td>BIOL 2011L/2013 General Microbiology</td>
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<td></td>
<td></td>
<td>BIOL 1601L/1603 General Zoology</td>
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<tr>
<td></td>
<td></td>
<td><strong>Physical Sciences</strong></td>
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<tr>
<td></td>
<td></td>
<td>ASTR 2001L/2003 Survey of the Universe</td>
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<tr>
<td></td>
<td></td>
<td>CHEM 1051L/1053 Chemistry in the Mod. World</td>
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<td></td>
<td>CHEM 1101L/1103 University Chemistry I and CHEM 1121L/1123 University Chemistry II</td>
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<td></td>
<td>GEO 1111L/1113 General Geology and GEO 1131L/1133 Environmental Geology</td>
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<td>PHYS 1021L/1023 Physics in Human Affairs</td>
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<td></td>
<td></td>
<td>PHYS 2011L/2013 College Physics I and PHYS 2031L/2033 College Physics II</td>
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<td></td>
<td></td>
<td>PHYS 2050L/2054 University Physics I</td>
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<td></td>
<td></td>
<td>PHYS 2070L/2074 University Physics II</td>
</tr>
<tr>
<td>g. Advanced Composition</td>
<td>3 hours - Exemption may be granted by either: a) grades of “A” or “B” in ENGL 1013 and “A” in ENGL 1023 taken at UA or b) passing the Advanced Composition Exam* (Journalism majors must complete ENGL 2013)</td>
<td>ENGL 2003 Advanced Composition or ENGL 2013 Essay Writing (ENGL 2013 is required for all journalism majors) * (Students must satisfy the ENGL 1013 and 1023 requirement and complete 30 credit hours before taking the Advanced Composition Exam. The exam must be taken before the student has completed 96 credit hours. Students who do not pass the Advanced Composition Exam must take ENGL 2003.)</td>
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<tr>
<td>Core Area</td>
<td>Hours</td>
<td>Courses</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>a. Communication/Philosophy/Foreign Language</td>
<td>3</td>
<td>COMM 1313 Fundamentals of Communication (required for art education) OR</td>
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<td></td>
<td></td>
<td>PHIL 2203 Introduction to Logic OR</td>
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<td></td>
<td></td>
<td>An additional foreign language</td>
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<tr>
<td>b. US History/American National Government and Western Civilization</td>
<td>9</td>
<td>U.S. History/American National Government- 3 hours from:</td>
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<tr>
<td></td>
<td></td>
<td>HIST 2003 History of the American People to 1877 or HIST 2013 History of the American People from 1877 or</td>
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<td>PLSC 2003 American National Government</td>
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<tr>
<td></td>
<td></td>
<td>Western Civilization – 6 hours from:</td>
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<td></td>
<td></td>
<td>WCIV 1003 Western Civilization I and WCIV 1013 Western Civilization II</td>
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<td></td>
<td></td>
<td>OR HIST 1113 World Civilizations I and HIST 1123 World Civilizations II</td>
</tr>
<tr>
<td>c. Foreign Language</td>
<td>Up to 9 hours (depending on placement)</td>
<td>Completion through the Intermediate II (2013) level in a single language (Includes course numbers 1003*, 1013, 2003, 2013)</td>
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<td></td>
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<td>* 1003 is non-degree credit unless student completed two years in a single foreign language and takes 1003 in a different language. Students under this plan must begin with a degree-credit course in foreign language.</td>
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<tr>
<td>d. World Literature</td>
<td>6</td>
<td>WLIT 1113 World Literature I</td>
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<td>WLIT 1123 World Literature II</td>
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<tr>
<td>e. Social Sciences</td>
<td>3</td>
<td>ANTH 1023 Introduction to Cultural Anthropology</td>
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<td></td>
<td></td>
<td>ECON 2013 Principals of Macroeconomics</td>
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<td>ECON 2143 Basic Economics</td>
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<td>GEOG 2103 Emerging Nations</td>
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<td>GEOG 2203 Developed Nations</td>
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<td></td>
<td>PHIL 2003 Introduction to Philosophy</td>
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<td></td>
<td>PHIL 2103 Introduction to Ethics</td>
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<td></td>
<td></td>
<td>PSYC 2003 General Psychology (required for art education)</td>
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<td>SOCI 2013 General Sociology</td>
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<td></td>
<td></td>
<td>SOCI 2033 Social Problems</td>
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<tr>
<td>f. Natural Sciences</td>
<td>8 hours with 4 hours of Biological Sciences and 4 hours of Physical Sciences</td>
<td>Biological Sciences</td>
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<tr>
<td></td>
<td></td>
<td>ANTH 1011L/1013 Biological Anthropology</td>
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<td>BIOL 1601L/1603 General Zoology</td>
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<td>Physical Sciences</td>
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<td>ASTR 2001L/2003 Survey of the Universe</td>
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<td>CHEM 1051L/1053 Chemistry in the Mod. World</td>
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<td>GEOL 1111L/1113 General Geology</td>
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<td></td>
<td>PHYS 1021L/1023 Physics in Human Affairs</td>
</tr>
<tr>
<td>g. Advanced Composition</td>
<td>3 hours - Exemption may be granted by either: a) grades of “A” or “B” in ENGL 1013 and “A” in ENGL 1023 taken at UA or b) passing the Advanced Composition Exam*</td>
<td>ENGL 2003 Advanced Composition or ENGL 2013 Essay Writing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*(Students must satisfy the ENGL 1013 and 1023 requirement and complete 30 credit hours before taking the Advanced Composition Exam. The exam must be taken before the student has completed 96 credit hours. Students who do not pass the Advanced Composition Exam must take ENGL 2003.)</td>
</tr>
</tbody>
</table>
### Additional Fulbright College BM Core Requirement Areas

<table>
<thead>
<tr>
<th>Core Area</th>
<th>Hours</th>
<th>Courses</th>
</tr>
</thead>
</table>
Western Civilization – 6 hours from: WCIV 1003 Western Civilization I and WCIV 1013 Western Civilization II or HIST 1113 World Civilizations I and HIST 1123 World Civilizations II |
| b. Foreign Language                          | Up to 9 hours (depending on placement) | Completion through the Elementary II (1013) level in a single language (Includes course numbers 1003* and 1013)  
* 1003 is non-degree credit unless student completed two years in a single foreign language and takes 1003 in a different language. Students under this plan must begin with a degree-credit course in foreign language. |
| c. Fine Arts/ World Literature              | 6           | MLIT 1003 Music Lecture  
WLIT 1113 World Literature |
| d. Social Sciences                           | 3           | ANTH 1023 Introduction to Cultural Anthropology  
ECON 2013 Principals of Macroeconomics  
ECON 2143 Basic Economics  
GEOG 2103 Emerging Nations  
GEOG 2203 Developed Nations  
PHIL 2003 Introduction to Philosophy  
PHIL 2103 Introduction to Ethics  
PHIL 2203 Introduction to Logic  
PSYC 2003 General Psychology (Required for Music Education)  
SOC 2013 General Sociology  
SOC 2033 Social Problems |
| e. Natural Sciences                          | 8 hours with 4 hours of Biological Sciences and 4 hours of Physical Sciences | Biological Sciences  
ANTH 1011L/1013 Biological Anthropology  
BIOL 1541L/1543 Principles of Biology  
BIOL 1611L/1613 Plant Biology  
BIOL 2011L/2013 General Microbiology  
BIOL 1601L/1603 General Zoology  
Physical Sciences  
ASTR 2001L/2003 Survey of the Universe  
CHEM 1051L/1053 Chemistry in the Mod. World  
CHEM 1101L/1103 University Chemistry I  
CHEM 1121L/1123 University Chemistry II  
GEOG 1111L/1113 General Geology  
GEOG 1131L/1133 Environmental Geology  
PHYS 1021L/1023 Physics in Human Affairs  
PHYS 2011L/2013 College Physics I  
PHYS 2031L/2033 College Physics II  
PHYS 2050L/2054 University Physics I  
PHYS 2070L/2074 University Physics II |
| f. Advanced Composition                      | 3 hours - Exemption may be granted by either: a) grades of “A” or “B” in ENGL 1013 and “A” in ENGL 1023 taken at UA or b) passing the Advanced Composition Exam* | ENGL 2003 Advanced Composition or ENGL 2013 Essay Writing  
* (Students must satisfy the ENGL 1013 and 1023 requirement and complete 30 credit hours before taking the Advanced Composition Exam. The exam must be taken before the student has completed 96 credit hours. Students who do not pass the Advanced Composition Exam must take ENGL 2003.) |
## Additional Fulbright College BS Core Requirement Areas

<table>
<thead>
<tr>
<th>Core Area</th>
<th>Hours</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. US History/ American National Government</strong></td>
<td></td>
<td><strong>U.S. History/American National Government- 3 hours from:</strong></td>
</tr>
<tr>
<td>and Western Civilization</td>
<td></td>
<td>HIST 2003 History of the American People to 1877 or HIST 2013 History of the American People from 1877 or PLSC 2003 American National Government <strong>Western Civilization – 6 hours from:</strong> WCV 1003 Western Civilization I and WCV 1013 Western Civilization II OR HIST 1113 World Civilizations I and HIST 1123 World Civilizations II</td>
</tr>
<tr>
<td><strong>b. Foreign Language</strong></td>
<td>Up to 9 hours (depending on placement)</td>
<td>Completion through the Intermediate I (2003) level in a single language (Includes course numbers 1003*, 1013, 2003) * 1003 is non-degree credit unless student completed two years in a single foreign language and takes 1003 in a different language. Students under this plan must begin with a degree-credit course in foreign language.</td>
</tr>
<tr>
<td><strong>c. Fine Arts/ World Literature/ Philosophy</strong></td>
<td>9 hours total</td>
<td><strong>Fine Arts:</strong>  ARCH 1003 Architecture Lecture or LARC 1003 Landscape Architecture ARHS 1003 Art History or ARTS 1003 Art Studio COMM 1003 Film Lecture DANC 1003 Movement and Dance DRAM 1003 Theater Lecture HUMN 1003 Introduction to the Arts and Aesthetics MLIT 1003 Music Lecture <strong>World Literature:</strong> WLT 1113 World Literature I WLT 1123 World Literature II OR a) a foreign language literature course b) any other WLT course <strong>Philosophy:</strong> PHIL 2003 Introduction to Philosophy PHIL 2103 Introduction to Ethics PHIL 2203 Introduction to Logic</td>
</tr>
<tr>
<td><strong>d. Natural Sciences</strong></td>
<td>Determined by the department of the major</td>
<td></td>
</tr>
<tr>
<td><strong>e. Social Sciences</strong></td>
<td>3</td>
<td><strong>ANTH 1023 Introduction to Cultural Anthropology</strong> ECON 2013 Principles of Macroeconomics or ECON 2143 Basic Economics GEOG 2103 Emerging Nations or GEOG 2203 Developed Nations PSYC 2003 General Psychology SOCI 2013 General Sociology</td>
</tr>
<tr>
<td><strong>f. Advanced Composition</strong></td>
<td>3 hours - Exemption may be granted by either: a) grades of “A” or “B” in ENGL 1013 and “A” in ENGL 1023 taken at UA or b) passing the Advanced Composition Exam *</td>
<td><strong>ENGL 2003 Advanced Composition or ENGL 2013 Essay Writing</strong> <em>(Students must satisfy the ENGL 1013 and 1023 requirement and complete 30 credit hours before taking the Advanced Composition Exam. The exam must be taken before the student has completed 96 credit hours. Students who do not pass the Advanced Composition Exam must take ENGL 2003.)</em></td>
</tr>
</tbody>
</table>
MISSION AND OBJECTIVES

Vision Statement
The Sam M. Walton College of Business is a nationally competitive business school that connects people with organizations and scholarship with practice by combining excellent student learning experiences with quality research serving Arkansas and the world.

Core Values
Excellence: We strive for excellence in all we do.
Professionalism: We believe organizational practices must be built on an ethical foundation and high standards of professional behavior.
Innovation: We value creativity, innovation, and entrepreneurial spirit.
Collegiality: We believe in working together to examine situations and ideas from diverse perspectives.

Mission Statement
The Walton College, the flagship business school of the state of Arkansas, has a three-fold mission:

Teaching
Educate a diverse population of students in bachelor’s, master’s, and doctoral programs to be tomorrow’s business, community, and academic leaders;

Research
Discover and disseminate knowledge through our research to support excellence and innovation in organizations; and

Service
Share our business expertise in support of our state, our professions, and the academic community.

FACILITIES AND RESOURCES

The Walton College offers degree programs for undergraduate students and for graduate students at both the master’s and doctoral levels. Walton College is located in two modern buildings designed to be a functional home for the on-campus programs. These attractive facilities house fully equipped classrooms for business classes, eight state-of-the-art computer laboratories for both class and individual use, faculty and administrative offices, an honors program study area with computer access, a Career Development Center, and a large study room equipped for individual as well as group studying.

The library of the college is part of the general University Libraries and is housed in Mullins Library. The business and economics collection comprises approximately 55,000 volumes and makes this library one of the best in the region.
Walton College also operates centers for research, outreach, and public service. Information about these centers may be found in the University Centers and Research Units section of this catalog. Walton College centers include the following:

- Arkansas Household Research Panel
- Bessie Moore Center for Economic Education
- Center for Business and Economic Research
- Center for Management and Executive Development
- Center for Retailing Excellence
- Garrison Financial Institute
- Information Technology Research Center
- Supply Chain Management Research Center
- Small Business Development Center

**DEGREES OFFERED**

Undergraduate students may pursue curricula leading to one of the following degrees: Bachelor of Science in Business Administration (B.S.B.A.), Bachelor of Science in International Business (B.S.I.B.). In each of these degree programs, the pre-business requirements must be completed before students may enroll in upper division business courses. Students in Walton College may pursue an academic minor in business or in the J. William Fulbright College of Arts and Sciences. Walton College also offers business minors for business and non-business students. Degree programs and minors are outlined on subsequent pages.

**MAJORS, CONCENTRATIONS, AND MINORS**

**Majors with Concentrations**
- Accounting
- Economics
  - Business Economics
  - International Economics and Business
- Finance
  - Banking
  - Financial Management/Investment
  - Insurance
  - Real Estate
  - Personal Financial Management
- General Business
- Information Systems
- Management
  - Human Resource Management
  - Small Business and Entrepreneurship
  - Organizational Leadership
- Marketing
  - Marketing Management
  - Retail Marketing
- Transportation

**Minors**
- Accounting
- Business Economics
- Enterprise Resource Planning
- Finance
- Financial Economics
- Information Systems
- Management
- Marketing
- Transportation

**OTHER PROGRAMS**

**Cooperative Education**

Cooperative education (co-op) is an academic program that enables students to gain degree-related experience prior to graduation. It is a planned, progressive educational strategy in which the student obtains work experience related to his or her academic major and career goals. Participating students earn academic credit for their work experiences and are always paid by their employers. Co-op students can maintain their status as full-time students while participating in the program, even if their co-op experience requires they spend a semester working full-time.

Walton College students are eligible for co-op credit if they have
1) completed the pre-business core and have obtained at least 60 hours of credit, 2) a cumulative grade-point average of 2.5 or better, and 3) a grade-point average of 2.5 or better for the last full-time term completed. Students may receive one hour of credit per semester for a job that requires 12-19 hours of work per week or two hours of credit per semester for a job that requires 20 or more hours per week. A maximum of six hours of degree credit may be awarded as a junior- or senior-level business elective. Full-time students who work 40 hours or more per week in internships approved by the co-op education academic coordinator are eligible for three hours of academic credit per semester, or per full summer, provided they have a minimum GPA of 2.75, as well as having received a GPA of at least 2.75 in the prior full-time semester.

Students may seek either to qualify a job they have found themselves for co-op credit, or they may seek an employment opportunity through the Walton College Career Development Center, WCOB 117. The employment opportunity may be either a full-time, off-campus work assignment that alternates with semesters spent on campus taking courses (an alternating co-op), or it may be a part-time job undertaken concurrently with course work (a parallel co-op). Once a student has been matched with an approved job, the co-op coordinator, the faculty co-op adviser, the student’s work place supervisor, and the student work together to formulate career-related learning objectives for the coming semester of work. These objectives must be in writing and in to the cooperative education coordinator in order for a student to be registered for co-op. At the end of each semester of work, the student is required to submit a three- to ten-page paper (depending on credit hours to be received) that re-states the student’s learning objectives for the semester and discusses how the job experience fulfilled the objectives. The student is also required to submit an employer evaluation form, and the work supervisor is asked to submit an evaluation of the student’s work.

For information on participating in Walton College co-op program, a current listing of co-op opportunities, and phone numbers of people with whom you may discuss these opportunities, visit the Cooperative Education home page on the Web at http://waltoncollege.uark.edu/coop/.

**COLLEGE ADMISSION REQUIREMENTS**

All students admitted to the University of Arkansas, Fayetteville, are eligible for admission to the Sam M. Walton College of Business. Students will be required to follow the degree program requirements set forth in the catalog corresponding to the student’s first semester in Walton College, not the first semester of enrollment at the University of Arkansas.

**COLLEGE SCHOLARSHIPS**

High school graduates who expect to enroll in Walton College are encouraged to apply for scholarships made available to freshmen...
by individuals, business firms, and organizations. Also available to freshmen, regardless of degree program, are freshmen academic scholarships. Current Walton College students may apply for both college and departmental scholarships beginning in January of each year for the following academic year. Information on these financial awards may be secured from the University Scholarship Office and the Walton College Undergraduate Programs Office.

STUDENT ORGANIZATIONS

In addition to the general university student organizations, Walton College Student Ambassadors, Study Abroad Ambassadors, and a Business Dean’s Student Advisory Board, there are several college societies open to Walton College students. These include the following:

- Alpha Kappa Psi (business professional)
- American Marketing Association
- Assoc. of Information Technology Professionals
- Beta Alpha Psi (accounting honorary and professional)
- Beta Gamma Sigma (business honorary)
- Economics Club
- Finance Club
- National Assoc. of Black Accountants
- Omicron Delta Epsilon (economics honorary)
- Human Resource Management Association
- Transportation and Logistics Association

COLLEGE ACADEMIC REGULATIONS

Pre-Business Requirements

Students pursuing a degree in Walton College are classified as pre-business with an intended major until all pre-business requirements are fulfilled. The following policies apply to the pre-business program:

To be eligible to enroll in upper-division business courses in Walton College, a student must complete the Walton College computer competency requirement (WCOB 1120) and maintain at least a 2.50 (on a 4.00 scale) overall grade-point average (GPA) in addition to completing the 42 credit hours listed below of pre-business core courses (or their equivalents), also with at least a 2.50 GPA. Further, a student must complete all courses offered to meet this requirement with a grade of “C” or better or the requirement for graduation. The pre-business core courses are as follows:

- COMM 1313 Fundamentals of Communication
- ECON 2013 Principles of Macroeconomics
- ECON 2023 Principles of Microeconomics
- ENGL 1013 Composition I
- ENGL 1023 Composition II
- MATH 2043 Survey of Calculus
- MATH 2053 Finite Mathematics
- WCOB 1111 Freshman Business Connections
- WCOB 1012 Legal Environment of Business
- WCOB 1023 Business Foundations
- WCOB 1033 Data Analysis and Interpretation
- WCOB 2013 Markets and Consumers
- WCOB 2023 Production and Delivery of Goods and Services
- WCOB 2033 Acquiring and Managing Human Resources
- WCOB 2043 Acquiring and Managing Financial Resources

Students’ records will be evaluated each semester to determine whether a student should be moved to a major and have pre-business classification removed. After receiving notification that a student has been admitted into his or her major, the student is expected to arrange for a degree check by the Undergraduate Programs Office to ascertain remaining degree requirements.

Registration in Junior/Senior-Level Walton College Courses

Walton College students must complete the pre-business requirements prior to enrollment in junior- or senior-level courses in Walton College.

Non-degree seeking students and students enrolled in other colleges are subject to the same course prerequisites as students within Walton College. Specific exceptions to this policy must be addressed to the associate dean for academic affairs in Walton College.

Restrictions on General Education Electives: Only six hours total of general education electives will be allowed in Physical Education Activity (PEAC) or Dance Education Activity (DEAC) courses.

Transfer of Credit Policies

In addition to the University policies controlling the granting of credit for course work taken at other institutions, the following policies apply to transfer work applied to any undergraduate business program:

1. Transfer students considering admission to pursue a major in Walton College must have completed the pre-business courses and requirements listed above and have a 2.50 (on a 4.00 scale) cumulative grade-point average in the pre-business courses and in his or her overall grade-point average. Transfer students will be classified as pre-business students until pre-business core requirements have been completed.

2. A pre-business and overall grade-point average for courses accepted for transfer by the University of Arkansas will be calculated and used to evaluate the completion of the pre-business requirements by students transferring courses from other institutions.

3. Unless exceptions are granted at the time of admission to the University of Arkansas, transfer courses accepted by the University will not be accepted by Walton College for degree purposes unless a grade of “C” or better has been earned in each of these courses. (See the Admission chapter.)

4. A transferred course cannot carry more degree hours than are available in a similar University of Arkansas course. For example, a four-hour principles of economics course transfers as three degree hours.

5. Business courses completed at the freshman or sophomore level at another institution will not count as equivalents of junior- or senior-level courses offered in Walton College (University of Arkansas), and no transfer credit shall be granted for any such course(s) in Walton College.

6. At least 50 percent of program requirements in business and economics must be taken in residence.

7. All courses within a student’s major and Business Strategy and Planning (WCOB 3016) must be taken in residence at the University of Arkansas, Fayetteville.

8. Junior- or senior-level core courses in business and economics may be transferred from a school accredited by AACSB International.

9. Junior- or senior-level core courses taken at a non-AACSB International-accredited, four-year institution must either be repeated or validated by procedures specified and approved by the managing director of undergraduate programs.

10. Junior- or senior-level electives in business and economics taken at a non-AACSB International-accredited, four-year institution may be accepted in transfer as junior/senior business electives.

11. If a student takes courses with different names but with similar content at different institutions or in different colleges within the University of Arkansas, degree credit will be allowed for only one of the courses, for example, principles of economics and agricultural economics.
12. Courses taken at any higher education institution where the course content is remedial are not acceptable for degree credit.
13. The student should be prepared to submit course descriptions, syllabi, or other course-related information for transfer course work if there is any question as to whether Walton College will grant degree credit for such work.
14. Exceptions: All requests for, exceptions to, and variations from the rules, regulations, and requirements of Walton College and the university should be made in writing to the associate dean for academic affairs of Walton College. Consult the Undergraduate Programs Office in Walton College for these requests.

**Course Loads**

The normal course load in Walton College is 15 to 17 hours per semester (and six hours per summer term). Students with a 2.75 grade-point average the previous semester may take a maximum of 18 hours. Seniors may take 18 to 19 hours, if required for graduation, during their final semester. Students on academic warning are limited to a maximum course load of 12 hours. University regulations on the number of hours allowed per semester are found in the Orientation and Registration section of this catalog.

**Foreign Language Concentration**

An undergraduate B.S.B.A. degree-seeking student may elect to substitute 12 hours in a single upper-level foreign language for 12 to 15 of the 15 hours required in the junior-senior business elective block of courses for the degree requirements.

**Double Major**

A student may elect to obtain a double major by completing all required courses for two majors in Walton College (but not in two concentrations within a single major). The minimum course load for a double major is 138 degree credit hours to include all requirements for both majors. If there are courses common to both majors, the department chairs involved will agree upon and specify additional requirements in lieu of the common courses. The junior/senior business elective block is reduced by three hours; however, choice of the junior/senior business electives is restricted to no more than three total hours from each department that offers the two majors. Students who have elected to substitute a foreign language requirement for a double major must complete the total number of semester hours specified for the degree requirements, and the university should be made in writing to the associate dean for academic affairs of Walton College. Consult the Undergraduate Programs Office in Walton College for these requests.

**Additional Bachelor’s Degrees**

Students seeking a second bachelor’s degree must contact the undergraduate programs office to ascertain specific requirements. Degree candidates must meet the university’s general graduation requirements. The university requires that 1) the student take a minimum of 30 semester hours over the requirements for the first degree, and 2) the 30 hours cover a minimum of 36 weeks in residency at the Fayetteville campus. Walton College also requires that the student complete all courses in the pre-business and business core and the major and any additional business requirements (if some of these have been completed on the first degree, they are waived). It is recommended that any additional courses needed to finish the University’s 30-hour requirement be junior or senior business electives. The second degree may be taken after the first is awarded, or both degrees may be awarded simultaneously after completion of all requirements for both.

**College Graduation Requirements**

1. **University Requirements.** Degree candidates must meet the following: the University’s general entrance requirements, number of credit hours required in residence, and the “requirements for graduation,” including the University Core American history, and English proficiency.
2. **Hour Requirements.** Degree candidates must satisfactorily complete the total number of semester hours specified for the curriculum in courses approved for one of the majors outlined in the succeeding pages. No less than 50 percent of the total credits must be in approved subjects other than business.

NOTE: Not all courses offered by the University will be accepted for degree credit by Walton College. Courses falling into this category are ANTH 0003, PHSC 0003, CIED 0003, ENGL 0003, MGMT 1033 and MATH 0003. Developmental courses are defined as 1) any course so designated by the university, and 2) any lower-division course taken after a higher-level course is taken. Credit will not be given for duplicate course work.

3. **Grade Requirements.** Students must earn a grade of “C” or better in all pre-business core course requirements. Each student must have a 2.00 cumulative GPA in each of the following areas:
   a. All work completed at the University of Arkansas.
   b. All courses specifically designated for the major.
   c. All required business core courses and required economics courses.

4. **General Education Course Work.** A student’s general education course work must satisfy University Core Requirements, additional college/program course-specific requirements, as well as these two area requirements:
   a. Social Issues, Multicultural Environment, and Demographic Diversity.
   b. Micro and Macroeconomics. If a student has not satisfied these area requirements within the fine arts and/or social sciences areas of the university core, these area requirements must be satisfied through general education electives to allow students to complete degree requirements within the hours indicated above.

Courses that satisfy these area requirements are listed below. NOTE that many of these courses will also satisfy University Core Requirements. Where possible, a student should select courses that satisfy both requirements.

   a. Social Issues, Multicultural Environment, and Demographic Diversity
   ANTH 1023 Intro. to Cultural Anthropology (Univ. core)
   SOCI 2013 General Sociology (Univ. core)
   SOCI 2033 Social Problems (Univ. core)
   WCIV 1003 Western Civ. I (Univ. core)
   WCIV 1013 Western Civ. II (Univ. core)
   GEOG 1123 Human Geography (Univ. core)
   Any Foreign Language (Univ. core, if 2000-level or above, general education elective otherwise)
   b. Micro/Macro Economics
   ECON 2013 Principles of Macroeconomics (business core)
   ECON 2023 Principles of Microeconomics (business core)

5. **Residency Requirements.** The senior year’s curriculum (last 30 hours) in business must be taken in residence. In addition, the student’s major requirements (or the degree equivalent) and WCOB 3016 must be completed in residence. Specifically required junior or senior courses in business or economics must be taken at the University of Arkansas or at an AACSB-accredited school. At least 50 percent of the total hours in business and economics must be taken in residence.
6. **Correspondence Course Rules.** No more than 18 hours of course work taken by correspondence may apply toward a degree. These 18 hours may not include more than 12 hours of courses in economics or business, and may not include any junior- or senior-level economics or business courses without prior approval of the associate dean for academic affairs.

7. **Catalog/Curriculum Changes.** Business is a dynamic profession, and the college and department curricula are updated continuously to keep pace with changes in the business world. Students entering under this catalog will be required to comply with such curricular changes to earn their degree. The total number of hours required for the degree, however, may not be increased, and all work completed in accordance with this catalog prior to the curriculum change will be applied toward the student’s degree requirements. Furthermore, courses incorporated into the curriculum at a level lower than the one the student has completed are not required for that student unless there are specific prerequisites. Students entering under earlier catalogs are responsible for completing the graduation requirements as published in the catalog in effect when they entered the program. Students having interruptions of their academic programs that exceed two calendar years must complete the requirements published in the catalog in effect when they re-enter the program. Exceptions to the graduation requirements must be approved by the associate dean for academic affairs and appropriate department chair.

**Graduation with Honors**

The bachelor’s degree *Summa Cum Laude* (with highest honors), *Magna Cum Laude* (with high honors), or *Cum Laude* (with honors) may be conferred only upon those students who have successfully completed the Walton College Honors Program. Both Walton Scholars and Departmental Scholars are eligible for these designations. Students whose cumulative grade-point average place them in the top 10 percent of their graduating class but who have not completed the Honors Program are eligible for the designation “With Distinction” on their official transcript. Among those students completing the Honors Program, the designations *Summa Cum Laude, Magna Cum Laude* and *Cum Laude* shall be determined as follows:

- Top 20 percent of students completing the Honors Program: *Summa Cum Laude*
- Next 30 percent of students completing the Honors Program: *Magna Cum Laude*
- Next 50 percent of students completing the Honors Program: *Cum Laude*

No honors degree will be conferred upon a candidate who has not completed at least 50 percent of his or her degree work at the University of Arkansas or who, in the last four semesters of attendance, has a cumulative grade-point average of less than 3.00 or has received a “D” or “F” in any course in the last semester. Certain other requirements will be outlined on request by the dean of the College.

**EIGHT-SEMESTER DEGREE PROGRAM POLICY**

The Walton College offers an eight-semester degree-completion program. In each of the majors listed in this chapter, at least one eight-semester schedule is shown. Some majors offer several concentrations, and eight-semester programs are available for each of the concentrations in Section Two of the Catalog of Studies, online at http://catalogofstudies.uark.edu.

See also page 42 in the Academic Regulations chapter for information about the University’s degree-completion program.

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**HONORS PROGRAM**

Walton College honors program consists of two components: the four-year Walton Scholars Program and the Departmental Scholars Program. Students participating in the honors program will be eligible to graduate *Cum Laude, Magna Cum Laude, or Summa Cum Laude.* Students who do not participate in the honors program are eligible to graduate with distinction, a classification separate from the *Cum Laude* awards. Honors program students will receive priority for participation in the Arkansas Cooperative Education Program, SAKE, the portfolio management class, and financial support for study-abroad programs. They also have access to an honors study area.

**Eligibility for the Honors Program**

Admission will be offered to incoming freshmen with an ACT of 28 or higher and a high school GPA of 3.75. Students are required to maintain a cumulative GPA of 3.50 to remain in the program.

**Requirements for Walton Scholars Program:**

1. Complete 17 of 35 University Core hours in honors courses. MATH 2554 and MATH 2564 also count toward this requirement.
2. Demonstrate proficiency in a foreign language. This requires 0 to 12 hours of course work. Students may demonstrate proficiency by completing the 2013-level course in any foreign language.
3. Complete eight to nine credit hours of honors courses in Walton College to include:
   a. One three-hour college colloquium. This is an interdisciplinary course with topics appealing to a wide range of majors. The subject matter changes annually and is targeted to juniors.
   b. One three-hour departmental colloquium: Each department will offer one departmental colloquium each year. It is designed for seniors.
   c. A two- to three-hour thesis: The thesis is a major independent writing project and arises from an international study experience, an internship, or working with a professor on research.

**Requirements for the Departmental Scholars program:**

1. Complete nine hours of honors courses in the University Core and demonstrate proficiency in a foreign language by completing a 2003 course in any foreign language.
2. Complete eight to nine hours of honors courses in Walton College to include:
   a. One three-hour college colloquium
   b. One three-hour departmental colloquium
   c. A two- to three-hour thesis

**DEGREE REQUIREMENTS**

**Bachelor of Science in Business Administration (B.S.B.A.)**

The Bachelor of Science in Business Administration degree is offered through an educational program in the business and organizational disciplines intended to prepare individuals to make sustained contributions to organizations and society in a global, diverse, and dynamic environment. To achieve this objective the curriculum focuses on developing an individual’s interdisciplinary problem-solving skills, interpersonal and communication skills, ability to adapt to changing technology, spirit of entrepreneurial innovation, and ethical and professional values.
Walton College offers work in the following eight majors for the B.S.B.A. degree. Some majors have concentrations to allow additional specialization.

1. Accounting (ACCT)
2. Business Economics (BECO)
   a. Concentration I – Business Economics
   b. Concentration II – International Economics and Business
3. Finance (FINN)
   a. Concentration I – Banking
   b. Concentration II – Financial Management/Investment
   c. Concentration III – Insurance
   d. Concentration IV – Real Estate
   e. Concentration V – Personal Financial Management
4. General Business (GBUS)
5. Information Systems (ISYS)
6. Management (MGMT)
   b. Concentration II – Small Business and Entrepreneurship
   c. Concentration III – Organizational Leadership
7. Marketing (MKTG)
   a. Concentration I – Marketing Management
   c. Concentration II – Retail Marketing
8. Transportation (TRNS)

Requirements for B.S.B.A. Degree

Students pursuing a degree in Walton College are classified as pre-business with an intended major until all pre-business requirements are fulfilled. To enroll in upper-division courses, a student must earn a grade of “C” or better in each pre-business core course for admission into the major or for the graduation requirement.

A. University Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
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<tr>
<td>Finite Mathematics**</td>
<td>3</td>
</tr>
<tr>
<td>American History or Government</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>8</td>
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<tr>
<td>Social Science</td>
<td>9</td>
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<tr>
<td>Fine Arts &amp; Humanities</td>
<td>6</td>
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</tbody>
</table>

B. Additional Requirements for Business Students

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Fundamentals of Communication**</td>
<td>3</td>
</tr>
<tr>
<td>Survey of Calculus**</td>
<td>3</td>
</tr>
<tr>
<td>Business Social Science (one of the following)</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2003 General Psychology</td>
<td></td>
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<tr>
<td>PSYC 3013 Social Psychology</td>
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<td>PSYC 3023 Abnormal Psychology</td>
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<td>PSYC 3103 Cognitive Psychology</td>
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<td>PSYC 4063 Psychology of Personality</td>
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<td>PSYC 4073 Psychology of Learning</td>
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<tr>
<td>PSYC 4123 Perception</td>
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<tr>
<td>SOCI 2013 General Sociology</td>
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<td>SOCI 3033 American Minorities</td>
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<td>SOCI 3223 Social Psychology</td>
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<td>SOCI 3303 Social Data and Analysis</td>
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<td>SOCI 4063 Organizations in Society</td>
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<td>PLSC 2003 American National Government</td>
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<tr>
<td>PLSC 3103 Public Administration</td>
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<tr>
<td>PLSC 3113 Dynamics of Service Sector Organizations</td>
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</table>

C. Business Core Courses

Lower-Division Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>WCOB 1120 Computer Competency Requirement**</td>
<td>24</td>
</tr>
<tr>
<td>WCOB 1111 Freshman Business Connections**</td>
<td>1</td>
</tr>
<tr>
<td>WCOB 1012 Legal Environment of Business**</td>
<td>2</td>
</tr>
<tr>
<td>WCOB 1023 Business Foundations**</td>
<td>3</td>
</tr>
<tr>
<td>WCOB 1033 Data Analysis and Interpretation**</td>
<td>3</td>
</tr>
<tr>
<td>ECON 2013 Principles of Macroeconomics**</td>
<td>3</td>
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<tr>
<td>ECON 2023 Principles of Microeconomics**</td>
<td>3</td>
</tr>
<tr>
<td>WCOB 2013 Markets and Consumers**</td>
<td>3</td>
</tr>
<tr>
<td>WCOB 2023 Prod. and Delivery of Goods and Services**</td>
<td>3</td>
</tr>
<tr>
<td>WCOB 2043 Acquiring and Managing Financial Resources**</td>
<td>3</td>
</tr>
<tr>
<td>WCOB 2033 Acquiring and Managing Human Resources**</td>
<td>3</td>
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Upper-Division Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>WCOB 3016 Business Strategy and Planning</td>
<td>6</td>
</tr>
</tbody>
</table>

D. Major Requirements

E. Business Electives

F. General Education Electives

(A total of 16 hours of general education electives are required for the Bachelor of Science in Business Administration (B.S.B.A.). General education electives must be non-business courses and may include no more than six hours of PEAC or DEAC courses. Students may utilize general education electives to complete a minor outside the Walton College. In addition, these electives may fulfill requirements for Social Issues, Multicultural Environment, and Demographic Diversity if not otherwise completed in the Business Social Science requirement or by completing University Core).

TOTAL REQUIRED FOR B.S.B.A. DEGREE 126

(Total is less than the sum of the categories because some courses count in two categories.)

** Pre-Business requirement: These 42 hours must be completed with a GPA of 2.50, an overall GPA of 2.5, and a grade of “C” or better in each course before a student is allowed to take upper-division business courses.

In addition to the core courses, each student will complete the required major courses, junior- senior-level business electives, and electives specified by each major.

Each student must have a 2.00 cumulative grade-point average in each of the following areas: all work completed at this university, all courses specifically designated for the major, and all required Walton College core and economics courses. Students must earn a grade of “C” or better in each of the pre-business core courses.

Bachelor of Science in International Business Degree (B.S.I.B.)

The Bachelor of Science in International Business degree is intended for students who wish to learn more about the international aspects of business. It provides preparation for a broad range of careers in business, including accounting, management, marketing, economics, information systems, finance, and transportation and
logistics. This degree is also well suited for students wishing to continue their studies in law, international affairs, or graduate education in business and economics.

This degree requires completion of the University Core and Walton College Core courses, as well as course work in international business, a single foreign language and an area of study related to that language. In addition, students must select a concentration in one of the following areas: accounting, business economics, information systems, finance, general business, management, marketing, or transportation and logistics.

Students pursuing a degree in the Sam M. Walton College of Business are classified as pre-business with an intended concentration until all pre-business requirements are fulfilled. For admission into the intended concentration, a student must obtain at least a 2.50 (on a 4.00 scale) overall grade-point average, in addition to the completion of all pre-business core courses listed elsewhere in the catalog (or equivalents), also with a minimum 2.50 grade-point average. Further, a student must earn a grade of “C” or better in each of the pre-business core courses for admission into the major or for the graduation requirement.

Graduation Requirements for the B.S.I.B. Degree

Each student must have a 2.00 cumulative grade-point average in each of the following areas: all work completed at this university, all courses in the business core, and all designated international business courses/function/concentration/foreign language courses. In addition, students must earn a grade of “C” or better in each of the core business courses.

Course Requirements for the B.S.I.B. Degree

A. University Core Requirements

See description and listing of the university core for the B.S.B.A. degree.

B. Additional Requirements for Business Students

Fundamentals of Communication**
Survey of Calculus**
Business Social Science (one of the following) PSYC 2003 General Psychology
PSYC 3013 Social Psychology
PSYC 3023 Abnormal Psychology
PSYC 3103 Cognitive Psychology
PSYC 4063 Psychology of Personality
PSYC 4073 Psychology of Learning
PSYC 4123 Perception
SOCI 2013 General Sociology
SOCI 3033 American Minorities
SOCI 3223 Social Psychology
SOCI 3303 Social Data and Analysis
SOCI 4063 Organizations in Society
PLSC 2003 American National Government
PLSC 3103 Public Administration
PLSC 3113 Dynamics of Service Sector Organizations
PLSC 3243 The Judicial Process
PLSC 3803 International Organization
PLSC/SOCI 4053 Political Sociology
PLSC 4263 The Supreme Court and Civil Rights

C. Business Core Courses

Lower-Division Requirements
WCOB 1120 Computer Competency Requirement**
WCOB 1111 Freshman Business Connections**

WCOB 1012 Legal Environment of Business**
WCOB 1023 Business Foundations**
WCOB 1033 Data Analysis and Interpretation**
ECON 2013 Principles of Macroeconomics**
ECON 2023 Principles of Microeconomics**
WCOB 2013 Markets and Consumers**
WCOB 2023 Prod. and Delivery of Goods and Services**
WCOB 2043 Acquiring and Managing Financial Resources**
WCOB 2033 Acquiring and Managing Human Resources**

Upper-Division Course
WCOB 3016 Business Strategy and Planning

D. International Business and Collateral Course Requirements

International Business Requirements
ECON 4633 International Trade
ECON 4643 International Macroeconomics and Finance

Select 9 hours from the following:
FINN 3703 International Finance
MGMT 4583 International Mgmt.
MKTG 4833 International Marketing
TLOG 4643 International Transportation and Logistics
ECON 4653 Global Competition and Strategy
(E Other courses may fulfill this requirement if approved by an international business faculty adviser)
ECON 3853 Emerging Markets
ECON 3843 Economic Development, World Bank, and Multilateral Finance
ECON 3933 The Japanese Economic System
(E Other courses may fulfill this requirement if approved by an international business faculty adviser)

E. Business Concentration

Students must complete one of the following business concentrations:

Accounting
ACCT 3013 Accounting View of Economic Events
ACCT 3533 Accounting Technology
ACCT 3613 Managerial Uses of Accounting Information
ACCT 3723 Financial Reporting and Analysis
Plus three hour JR/SR accounting course
Plus six hours JR/SR interdisciplinary electives

Business Economics
ECON 3033 Microeconomic Theory
ECON 3133 Macroeconomic Theory
ECON 4333 Economics of Organizations
ECON 4743 Introduction to Econometrics
ECON 4653 Global Competition and Strategy
Plus three hour JR/SR economics course
Plus six hours JR/SR interdisciplinary electives

Information Systems
ISYS 2263 Intro. to Information Systems Development
ISYS 3293 Systems Analysis and Design
ISYS 3393 Business Application Development in the Visual Basic Environment
F. Foreign Language Requirements

Students whose native language is English or whose native language is not taught at the University of Arkansas must complete 12 hours of university course work in a single foreign language — six hours of intermediate language and six hours of upper-division course work in communications and business language, or equivalent. Students who, on the basis of prior knowledge of a foreign language, omit one or both courses in the intermediate language sequence — FLAN 2003, FLAN 2013 — may receive degree credit for omitted courses if they validate their higher placement by passing the business language course (or equivalent) with a grade of “C” or above. Students with no previous foreign language training or only rudimentary knowledge of a foreign language will be required to complete up to six hours of elementary language — FLAN 1003, FLAN 2003 — in addition to the 12 hours of language specified above. No degree credit will be given for elementary language courses.

Students may select one of the following language tracks:
- Arabic – ARAB 2003, ARAB 2013, ARAB 3003, ARAB 3013 or equivalent
- Chinese – CHIN 2003, CHIN 2013, CHIN 3033, and any other upper division CHIN
- French – FREN 2003, FREN 2013, FREN 4333, FREN 3033 or FREN 3003
- German – GERM 2003, GERM 2013, GERM 3003, and GERM 4333
- Italian – ITAL 2003, ITAL 2013, ITAL 3003, and ITAL 3013
- Japanese – JAPN 2003, JAPN 2013, JAPN 3003, and JAPN 3013
- Spanish – SPAN 2003, SPAN 2013, SPAN 3003, and SPAN 4333

Students whose native language is not English but is taught at the University of Arkansas must select a third language from the list above or substitute six hours of upper-division English language courses (i.e., speech, writing, or U.S. literature), to be selected with the consent of the international business adviser. Those students whose native language is not taught at the University of Arkansas will normally be required to select a third language.

G. Area Studies Requirements

For students taking a foreign language, nine hours of upper-division course work in the J. William Fulbright College of Arts and Sciences are required. Domestic students can satisfy this requirement in one of three ways:

1) any upper division foreign language course,
2) minor in a foreign language, and/or
3) select upper division courses related to the foreign language to include:
   - Arabic — any upper division course for Middle Eastern Studies (MEST) to include MEST 4003, 4003H or additional courses listed under MEST in the university catalog
   - Chinese/Japanese/Asian Studies — any upper division course for Asian Studies (AIST)
   - French — any upper division course for EUST
   - German — any upper division course for EUST
   - Italian — any upper division course for EUST
   - Spanish — any upper division course for Latin American Studies (LAST) or European Studies (EUST) to include LAST 4003, LAST 4003H, or LAST 470V or additional courses listed under LAST in the university catalog, or EUST 399VH, EUST 4003, EUST 4003H, EUST 470V, or EUST 470VH or additional courses listed under EUST in the university catalog.

International students may satisfy this requirement in one of two ways:

1) For students who choose to take a third language, area studies requirements are the same as those for domestic students.
2) For students who choose to take six hours of upper division English to satisfy their language requirement, nine hours of upper division course work in the J. William Fulbright College of Arts and
Sam M. Walton College of Business

Sciences pertaining to the United States to include any upper division course for American Studies (AMST) listed in the University catalog.

II. International Experience Requirement

At a minimum, a domestic student must complete a study abroad program approved by the Walton College of at least four weeks and six credit hours, or work abroad, or work with the international division of a domestic company as part of their program. Students are strongly encouraged, but not required, to seek job experience in a company located in a country related to their foreign language requirement.

Total Degree Requirements 125

(Total is more than the sum of the categories because some courses count for multiple requirements.)

Clarifying Notes on Degree Requirements

1. Courses that are required in either Walton College or the international business core and also are required in one of the business concentrations cannot be used to satisfy both requirements. For example, students who take FINN 3703 to satisfy the finance concentration requirements cannot also use it to satisfy the international business requirements.

2. Students who select ECON 2013 and ECON 2023 to partially satisfy the social science bloc and FLAN 2003 to partially satisfy the fine arts and humanities bloc of the University Core Requirements can complete the degree with 125 hours. Students selecting other courses to satisfy these requirements will have longer programs.

Bachelor of Science in International Business

Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The International Business degree program has eight concentrations:

• Accounting
• Business Economics
• Finance
• General Business
• Information Systems
• Management
• Marketing
• Transportation and Logistics

The first four semesters of each of concentration are exactly the same and are listed immediately below. The final four semesters of each concentration follow after that.

In addition to the coursework below, students must complete an International Experience Requirement and the Advanced Composition Requirement or gain exemption from the latter. Courses in BOLD must be taken in the semester designated. Courses in ITALICS may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations noted below are preferred.

B.S.I.B. First Four Semesters

Fall Semester 1
3 ENGL 1013 Composition I** - University Core
3 MATH 2053 Finite Math – University Core
3 COMM 1313 Speech Communication

Fall Semester 2
3 ENGL 1023 Composition II** - University Core
3 WCOB 1111 Freshman Business Connections
3 WCOB 1012 Legal Environment of Business*
0 WCOB 1120 Computer Competency Requirement
3 FLAN 2003 Intermediate Foreign Language I
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II** - University Core
3 WCOB 1023 Business Foundations
3 WCOB 1033 Data Analysis
3 ECON 2023 Microeconomics – University Core
3 FLAN 2013 Intermediate Foreign Language II
15 semester hours

Fall Semester 2
3 MATH 2043 Survey of Calculus**
3 ECON 2013 Macroeconomics** - University Core
6 Select TWO of the following:
   WCOB 2013 Markets and Consumers
   WCOB 2023 Production and Delivery of Goods and Services
   WCOB 2033 Acquiring and Managing Human Resources
   WCOB 2043 Acquiring and Managing Financial Resources
3 U.S. History or Political Science – University Core
3 Upper division FLAN course
18 semester hours

Spring Semester 2
3 WCOB 1120 Computer Competency Requirement
6 Select TWO of the following not completed in previous semester:
   WCOB 2013 Markets and Consumers
   WCOB 2023 Production and Delivery of Goods and Services
   WCOB 2033 Acquiring and Managing Human Resources
   WCOB 2043 Acquiring and Managing Financial Resources
16 semester hours

ALL pre-business requirements should be met by end of Spring Semester 2.

B.S.I.B. Accounting Final Four Semesters

Fall Semester 3
6 WCOB 3016 Business Strategy and Planning
3 Business Social Science
3 ACCT 3013 Accounting View of Economic Events
3 International Business and Collateral Elective – see page 204
15 semester hours

Spring Semester 3
3 ACCT 3533 Accounting Technology
3 ACCT 3613 Managerial Uses of Accounting
3 ECON 4633 International Trade Policy
3 Area Studies Course – see page 205
3 Social Science – University Core
15 semester hours

Fall Semester 4
3 ACCT 3723 Financial Reporting and Analysis
3 ECON 4643 International Monetary Policy
3 International Business and Collateral Elective – see page 204
3 Area Studies Course – see page 205
4 Natural Science – University Core
16 semester hours
Spring Semester 4
3 ACCT elective
3 Area Studies Course – see page 205
3 International Business and Collateral Elective – see page 204
6 Junior Senior Business Electives
15 semester hours

125 total hours

B.S.I.B. Business Economics Final Four Semesters

Fall Semester 3
6 WCOB 3016 Business Strategy and Planning
3 Business Social Science
3 ECON 3133 Macroeconomic Theory
3 International Business and Collateral Elective – see page 204
15 semester hours

Spring Semester 3
3 ECON 4633 International Trade Policy
3 ECON 4653 Global Competition and Strategy
3 ECON elective
3 Area Studies Course – see page 205
3 Social Science – University Core
15 semester hours

Fall Semester 4
3 ECON 4333 Economics of Organizations
3 ECON 4643 International Monetary Policy
3 International Business and Collateral Elective – see page 204
3 Area Studies Course – see page 205
4 Natural Science – University Core
16 semester hours

Spring Semester 4
3 ECON 4743 Introduction to Econometrics
3 Area Studies Course – see page 205
3 International Business and Collateral Elective – see page 204
6 Junior Senior Business Electives
15 semester hours

125 total hours

B.S.I.B. Finance Final Four Semesters

Fall Semester 3
6 WCOB 3016 Business Strategy and Planning
3 Business Social Science
3 FINN 3053 Financial Markets and Institutions
3 International Business and Collateral Elective – see page 204
15 semester hours

Spring Semester 3
3 FINN 3293 System Analysis and Design
3 FINN 3393 Business Application Development in the Visual Basic Environment
3 ECON 4633 International Trade Policy
3 Area Studies Course – see page 205
3 Social Science – University Core
15 semester hours

Fall Semester 4
3 FINN 4133 Advanced Investments or FINN 4233 Advanced Corporate Finance
3 ECON 4643 International Monetary Policy

3 International Business and Collateral Elective – see page 204
3 Area Studies Course – see page 205
4 Natural Science – University Core
16 semester hours

Spring Semester 4
3 FINN elective
3 Area Studies Course – see page 205
3 International Business and Collateral Elective – see page 204
6 Junior Senior Business Electives
15 semester hours

125 total hours

B.S.I.B. General Business Final Four Semesters

Fall Semester 3
6 WCOB 3016 Business Strategy and Planning
3 Business Social Science
3 Junior Senior Business Elective****
3 International Business and Collateral Elective – see page 204
15 semester hours

Spring Semester 3
6 Junior Senior Business Electives****
3 ECON 4633 International Trade Policy
3 Area Studies Course – see page 205
3 Social Science – University Core
15 semester hours

Fall Semester 4
3 Junior Senior Business Elective****
3 ECON 4643 International Monetary Policy
3 International Business and Collateral Elective – see page 204
3 Area Studies Course – see page 205
4 Natural Science – University Core
16 semester hours

Spring Semester 4
3 Area Studies Course – see page 205
3 International Business and Collateral Elective – see page 204
9 Junior Senior Business Electives****
15 semester hours

125 total hours

B.S.I.B. Information Systems

Fall Semester 3
6 WCOB 3016 Business Strategy and Planning
3 Business Social Science
3 ISYS 2263 Introduction to Information Systems
3 International Business and Collateral Elective – see page 204
15 semester hours

Spring Semester 3
3 ISYS 3293 System Analysis and Design
3 ISYS 3393 Business Application Development in the Visual Basic Environment
3 ECON 4633 International Trade Policy
3 Area Studies Course – see page 205
3 Social Science – University Core
15 semester hours
Fall Semester 4  
3 ISYS 4283 Centralized Data System  
3 ECON 4643 International Monetary Policy  
3 International Business and Collateral Elective – see page 204  
3 Area Studies Course – see page 205  
4 Natural Science – University Core  
16 semester hours

Spring Semester 4  
3 ISYS elective  
3 Area Studies Course – see page 205  
3 International Business and Collateral Elective – see page 204  
6 Junior Senior Business Electives  
15 semester hours

125 total hours

B.S.I.B. Management Final Four Semesters  
Fall Semester 3  
6 WCOB 3016 Business Strategy and Planning  
3 Business Social Science  
3 MGMT 4243 Ethics and Corporate Responsibility  
3 International Business and Collateral Elective – see page 204  
15 semester hours

Spring Semester 3  
3 MGMT 4583 International Management  
3 MGMT elective  
3 ECON 4633 International Trade Policy  
3 Area Studies Course – see page 205  
3 Social Science – University Core  
15 semester hours

Fall Semester 4  
3 MGMT elective  
3 ECON 4643 International Monetary Policy  
3 International Business and Collateral Elective – see page 204  
3 Area Studies Course – see page 205  
4 Natural Science – University Core  
16 semester hours

Spring Semester 4  
3 MGMT elective  
3 Area Studies Course – see page 205  
3 International Business and Collateral Elective – see page 204  
3 Junior Senior Business Electives  
15 semester hours

125 total hours

B.S.I.B. Transportation and Logistics Final Four Semesters  
Fall Semester 3  
6 WCOB 3016 Business Strategy and Planning  
3 Business Social Science  
3 TLOG 3613 Business Logistics  
3 International Business and Collateral Elective – see page 204  
15 semester hours

Spring Semester 3  
3 TLOG 3443 Introduction to Transportation  
3 TLOG 4643 International Transportation and Logistics  
3 ECON 4633 International Trade Policy  
3 Area Studies Course – see page 205  
3 Social Science – University Core  
15 semester hours

Fall Semester 4  
3 TLOG elective  
3 ECON 4643 International Monetary Policy  
3 International Business and Collateral Elective – see page 204  
3 Area Studies Course – see page 205  
4 Natural Science – University Core  
16 semester hours

Spring Semester 4  
3 TLOG elective  
3 Area Studies Course – see page 205  
3 International Business and Collateral Elective – see page 204  
3 Junior Senior Business Electives  
15 semester hours

125 total hours

* Must be taken prior to fall semester of sophomore year  
** Must be taken prior to fall semester of junior year  
*** Must be taken prior to fall semester of senior year  
**** No more than 9 hours of junior senior business electives can be taken in a single academic area
Minors in the J. William Fulbright College of Arts and Sciences

Students in Walton College may pursue an academic minor in the J. William Fulbright College of Arts and Sciences. Academic minors usually consist of 15 to 18 hours of course work. The available minors and course requirements are specified in the Fulbright College section of this catalog. Students must notify the Undergraduate Programs Office in Walton College of their intention to pursue a minor as early as possible. Walton College will certify that the requirements of the minor have been satisfied by graduation and, with the assistance of the Fulbright College, will advise students on the requirements to complete a minor. The minor will be designated on the student’s transcript.

Courses that are part of the University Core Requirements or the additional General Education Requirements or any other non-business course that is part of a student’s course of study may also be counted for credit in a minor. For example, ANTH 1023 Introduction to Cultural Anthropology, is a concentration in the B.S.B.A. social science bloc and can also be used to satisfy the requirements of the anthropology minor. Other courses in a minor can be counted as general education electives. Walton College economics majors in the business economics concentration or the international economics and business concentration may not obtain a Fulbright College minor in economics.

Business Administration Minors for Non-Business Students

To facilitate students outside Walton College in obtaining knowledge that will assist them in making sustained contributions to organizations and society in a global, diverse, and dynamic environment, the Walton College offers a business minor. The minor requires completion of a minimum of 21 required hours of study (including equivalencies) with at least 50 percent of the courses applied toward the minor taken in residence. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

All students seeking a business minor are required to complete the Walton College computer competency requirement (WCOB 1120) and the following courses:

<table>
<thead>
<tr>
<th>Concentration 1 – General Business</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>(at least 6 hours must be at the 3000 or 4000 level).</td>
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<tr>
<td>WCOB 1023 Business Foundations</td>
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<td>WCOB 1012 Legal Environment of Business</td>
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<tr>
<td>WCOB 2023 Production and Delivery of Goods and Services</td>
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<tr>
<td>WCOB 2033 Acquiring and Managing Human Resources</td>
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<tr>
<td>WCOB 2043 Acquiring and Managing Financial Resources</td>
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<tr>
<td>Plus any other 3000- or 4000-level Walton College course</td>
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<thead>
<tr>
<th>Concentration 2 – Accounting</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<td>(at least 6 hours must be at the 3000 or 4000 level).</td>
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<tr>
<td>WCOB 3533 Accounting Technology</td>
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<tr>
<td>ACCT 3613 Managerial Uses of Accounting Info</td>
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<tr>
<td>ACCT 3723 Financial Reporting and Analysis</td>
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<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
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<tr>
<th>Concentration 3 – Business Economics</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>ACCT 3533 Accounting Technology</td>
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<td>ACCT 3723 Financial Reporting and Analysis</td>
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<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
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<tr>
<td>WCOB 2013 Markets and Consumers</td>
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<tr>
<td>WCOB 2023 Production and Delivery of Goods and Services</td>
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<tr>
<td>WCOB 2033 Acquiring and Managing Human Resources</td>
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<tr>
<td>WCOB 2043 Acquiring and Managing Financial Resources</td>
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<tr>
<td>Plus any other 3000- or 4000-level Walton College course</td>
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<tr>
<th>Concentration 4 – Enterprise Resource Planning</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>ECON 4633 International Macroeconomics and Finance</td>
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<tr>
<td>ECON 4643 International Trade</td>
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<tr>
<td>ECON 4653 Global Competition and Strategy</td>
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<tr>
<td>ECON 468V International Economics and Business Seminar</td>
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<td>FINN 3703 International Finance</td>
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<td>MGMT 4583 International Management</td>
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<td>MKTG 4833 International Marketing</td>
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<td>TLOG 4643 International Transportation and Logistics</td>
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<tr>
<th>Concentration 5 – Enterprise Systems</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>WCOB 4213 ERP Fundamentals</td>
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<tr>
<td>WCOB 4223 Configuration and Implementation</td>
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<tr>
<td>Plus any additional six hours from the following:</td>
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<tr>
<td>ISYS 4233 Seminar in ERP Development</td>
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<tr>
<td>ISYS 4293 Business Intelligence</td>
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<td>Plus any additional three hours from the following:</td>
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<tr>
<td>ISYS 4233 Seminar in ERP Development</td>
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<tr>
<td>ISYS 4293 Business Intelligence</td>
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<tr>
<td>ISYS 4133 Business Development</td>
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<tr>
<td>WCOB 4213 ERP Fundamentals</td>
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<tr>
<td>WCOB 4223 Configuration and Implementation</td>
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<tr>
<th>Concentration 6 – Finance</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>WCOB 3016 Markets and Consumers</td>
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<tr>
<td>WCOB 3033 Acquiring and Managing Financial Resources</td>
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<tr>
<td>Plus any additional six hours from the following:</td>
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<tr>
<td>WCOB 4213 ERP Fundamentals</td>
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<tr>
<td>WCOB 4223 Configuration and Implementation</td>
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<tr>
<td>One 3 hour 4000 level ISYS course</td>
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<tr>
<th>Concentration 7 – Information Systems</th>
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<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>WCOB 1023 Data Analysis and Interpretation or equivalent</td>
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<tr>
<td>In addition, students must select and complete one of the following concentrations:</td>
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<tr>
<td>ECON 2143 Basic Economics Theory and Practice</td>
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<tr>
<td>WCOB 2023 Production and Delivery of Goods and Services</td>
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<tr>
<td>WCOB 2033 Acquiring and Managing Human Resources</td>
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<tr>
<td>WCOB 2043 Acquiring and Managing Financial Resources</td>
<td></td>
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<tr>
<td>Plus any other 3000- or 4000-level Walton College course</td>
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<tr>
<th>Concentration 8 – International Business</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>ECON 2143 Basic Economics Theory and Practice</td>
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<tr>
<td>ACCT 2013 Markets and Consumers</td>
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<tr>
<td>ACCT 2023 Production and Delivery of Goods and Services</td>
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<tr>
<td>ACCT 2033 Acquiring and Managing Human Resources</td>
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<tr>
<td>ACCT 2043 Acquiring and Managing Financial Resources</td>
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<tr>
<td>Plus any other 3000- or 4000-level Walton College course</td>
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<tr>
<th>Concentration 9 – Management</th>
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<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
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<tr>
<td>ACCT 3533 Accounting Technology</td>
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<tr>
<td>ACCT 3723 Financial Reporting and Analysis</td>
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<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
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<tr>
<td>Plus any additional six hours from the following:</td>
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<tr>
<td>ISYS 3393 Business Applications and Visual Basic</td>
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<tr>
<td>Plus any additional three hours from the following:</td>
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<tr>
<td>ISYS 4233 Seminar in ERP Development</td>
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<tr>
<td>ISYS 4293 Business Intelligence</td>
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<tr>
<td>ISYS 4133 Business Development</td>
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<tr>
<td>WCOB 4213 ERP Fundamentals</td>
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</tr>
<tr>
<td>WCOB 4223 Configuration and Implementation</td>
<td></td>
</tr>
<tr>
<td>One 3 hour 4000 level ISYS course</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration 10 – Marketing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
<td></td>
</tr>
<tr>
<td>ACCT 3533 Accounting Technology</td>
<td></td>
</tr>
<tr>
<td>ACCT 3723 Financial Reporting and Analysis</td>
<td></td>
</tr>
<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
<td></td>
</tr>
<tr>
<td>Plus any additional six hours from the following:</td>
<td></td>
</tr>
<tr>
<td>MKTG 4833 International Marketing</td>
<td></td>
</tr>
<tr>
<td>MKTG 4943 Retail Buying and Merchandise Control</td>
<td></td>
</tr>
<tr>
<td>TLOG 4643 International Transportation and Logistics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration 11 – Transportation and Logistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
<td></td>
</tr>
<tr>
<td>ACCT 3533 Accounting Technology</td>
<td></td>
</tr>
<tr>
<td>ACCT 3723 Financial Reporting and Analysis</td>
<td></td>
</tr>
<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
<td></td>
</tr>
<tr>
<td>Plus any additional six hours from the following:</td>
<td></td>
</tr>
<tr>
<td>TLOG 4643 International Transportation and Logistics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration 12 – Operations Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Select 12 hours from the following courses:</td>
<td></td>
</tr>
<tr>
<td>ACCT 3533 Accounting Technology</td>
<td></td>
</tr>
<tr>
<td>ACCT 3723 Financial Reporting and Analysis</td>
<td></td>
</tr>
<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
<td></td>
</tr>
<tr>
<td>Plus any additional six hours from the following:</td>
<td></td>
</tr>
<tr>
<td>TLOG 4643 International Transportation and Logistics</td>
<td></td>
</tr>
</tbody>
</table>
In addition to the above course requirements, non-business, degree-seeking students working toward a minor should note the following:

1. Students who elect to obtain a business minor must provide written notice of their intent to the dean’s office of the college in which they are receiving a degree. This notice and all requirements for the business minor must be completed prior to the awarding of the student’s undergraduate degree.

2. Business minor students must complete all 1000- and 2000-level courses required for the business minor and be a junior- or senior-level student to enroll in 3000- or 4000-level business courses.

3. All specific course prerequisites must be met. Although business minor students are not required to satisfy the entire pre-business core, they must complete the required courses and any other prerequisite course specified prior to enrolling in a 3000/4000-level course.

4. ECON 2143 will substitute for ECON 2013/2023 for prerequisite purposes. In addition, students who take both ECON 2013 (Macroeconomics) and ECON 2023 (Microeconomics) will satisfy the economics requirements of the minor.

5. Business minor students are ineligible to take WCOB 3016 Business Strategy and Planning.

6. Non-business students may substitute equivalent courses for the Walton College computer competency requirement. All equivalencies must be approved by the associate dean for academic affairs.

GRADUATE STUDIES

The University of Arkansas offers the following advanced degrees in business: Master of Accountancy, Master of Business Administration, Master of Arts in Economics, Master of Transportation and Logistics Management, Master of Information Systems, Doctor of Philosophy in Business Administration, and Doctor of Philosophy in Economics.

For further information about these programs and requirements for admission, see the Graduate School Catalog or write to the associate dean for academic affairs, Graduate School of Business, 475 WCOB.

ACCREDITATIONS

The college has been a member of and accredited by AACSB International - The Association to Advance Collegiate Schools of Business since 1931. The accounting program was accredited separately in 1986 at both the bachelor’s and master’s level. The master’s degree in the business administration program was approved in 1963. Accreditation by and membership in AACSB signifies commitment by the college to the goals of promoting and actualizing the highest standards of business education.

ACCOUNTING (ACCT)

Karen V. Pincus
Department Chair and S. Robson Walton Chair in Accounting
401 WCOB
479-575-4051

- Walter B. Cole Chair in Accounting and Professor Bouwman
- Doris M. Cook Chair in Accounting and Professor Callahan
- Garrison/Wilson Chair in Accounting and Professor Finn
- S. Robson Walton Chair in Accounting and Professor Pincus
- Ralph L. McQueen Chair in Accounting and Professor Richardson
- Associate Professor and BKD Lectureship in Accounting West
- Associate Professor and Nolan E. Williams Lecturer in Accounting Thomas
- Associate Professor Norwood
- Assistant Professors Henderson, Peters, Smith
- Clinical Associate Professor Leflar
- Instructors Greenhaw, Shook

The mission of the department of accounting is to cultivate an environment of educational excellence. We do so by pursuing the following endeavors:

- Providing a learning environment in which students interact with others to identify and solve accounting and business problems.
- Developing and disseminating knowledge that has the potential for significant impact on accounting, business, and education.
- Interacting with the accounting profession, the business and academic communities, and the community at large.

The department of accounting offers an undergraduate degree program in accounting and graduate programs at both the master’s and doctoral levels. The department’s programs are accredited by the AASCB – The International Association for Management Education, which ensures quality and promotes excellence and continuous improvement in undergraduate and graduate education.

A major in accounting is preparation for success in the business world. Every business needs accounting help, whether it is the largest retail company in the world, a small family-owned enterprise, an agency for the homeless, or a musical group touring the country. The accounting major provides an excellent foundation for a variety of careers.

Professional examinations, such as the Certified Public Accountant (CPA) or Certified Management Accountant (CMA) examinations, are governed by the organizations that administer the exam. Students should see the accounting department upon enrollment in the University of Arkansas for information relative to the professional exams.

The education objective at the undergraduate level is to provide an environment in which students learn skills necessary to become professional accountants, including information development and distribution; knowledge of accounting, auditing, and tax; knowledge of business and society; communication skills; analytical and decision-making skills; leadership; and professionalism. In addition, the accounting department offers courses in Business Law.

Accounting Major Requirements

Complete the requirements for a B.S.B.A. degree as listed on page 202.

Total General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>60</td>
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</tbody>
</table>

Walton College Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walton College Core Requirements</td>
<td>33</td>
</tr>
</tbody>
</table>

Course Requirements in the Major

<table>
<thead>
<tr>
<th>Course</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 3013 Accounting View of Economic Events</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 3533 Accounting Technology</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 3613 Managerial Uses of Accounting Info</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 3723 Fin. Reporting and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 3843 Fundamentals of Taxation</td>
<td>3</td>
</tr>
<tr>
<td>Choose any two of the three courses below:</td>
<td></td>
</tr>
<tr>
<td>ACCT 4673 Product, Project and Service Costing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 4753 Generally Accepted Accounting Principles</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 4963 Operational Auditing</td>
<td>3</td>
</tr>
</tbody>
</table>
Collateral Requirement:
  ISYS 2263 Introduction to Information Systems Development

Junior- senior-level electives within Walton College
(Only three hours are permitted within major field) 15
Total Walton College Requirements 60
Total Degree Requirements 126

NOTE: Selection of electives should be made in consultation with academic advisers. Students planning on taking professional examinations should ascertain course requirements by examining authorities. Successful completion of a Master of Accountancy Degree from the University of Arkansas will qualify a student to take the CPA examination in Arkansas. B.S.B.A. graduates would need additional accounting hours and other courses amounting to a total of 150 semester hours to sit for the CPA exam in Arkansas.

Accounting Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

In addition to the coursework below, students must complete the Advanced Composition Requirement or gain exemption. Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

Fall Semester 1
3 ENGL 1013 Composition I** - University Core
3 MATH 2053 Finite Math – University Core
3 COMM 1313 Speech Communication
1 WCOB 1111 Freshman Business Connections
2 WCOB 1012 Legal Environment of Business*
0 WCOB 1120 Computer Competency Requirement
3 U.S. History or Political Science – University Core
15 semester hours

Spring Semester 1
3 ENGL 1023 Composition II** - University Core
3 WCOB 1023 Business Foundations
3 WCOB 1033 Data Analysis
3 ECON 2023 Microeconomics – University Core
4 Natural Science – University Core
16 semester hours

Fall Semester 2
3 MATH 2043 Survey of Calculus**
3 ECON 2013 Macroeconomics** - University Core
6 Select TWO of the following:
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
3 Social Science – University Core
3 Fine Art/Humanities – University Core
18 semester hours

Spring Semester 2
3 Fine Art/Humanities – University Core
3 Business Social Science
4 Natural Science – University Core

Fall Semester 3
1 WCOB 1033 Data Analysis
3 ENGL 2003 or ENGL 2013 or General Education Elective
15 semester hours

Spring Semester 3
3 ACCT 3013 Accounting View of Economic Events
3 ACCT 3613 Managerial Uses of Accounting
3 ISYS 2263 Introduction to Information Systems Development
6 WCOB 3016 Business Strategy and Planning
1 General Education Elective
16 semester hours

Fall Semester 4
3 Select ONE of the following:
  ACCT 4673 Production Project and Service Costing
  ACCT 4753 Generally Accepted Accounting Principles
  ACCT 4963 Operational Auditing
6 Junior Senior Business Electives
6 General Education Electives
15 semester hours

Spring Semester 4
3 Select ONE of the following:
  ACCT 4673 Production Project and Service Costing
  ACCT 4753 Generally Accepted Accounting Principles
  ACCT 4963 Operational Auditing
6 Junior Senior Business Electives
6 General Education Electives
15 semester hours

126 total hours

* Must be taken prior to fall semester of sophomore year
** Must be taken prior to fall semester of junior year
*** Must be taken prior to fall semester of senior year

Accounting Minor for Business Students:

The Department of Accounting offers a minor for Walton College students desiring more knowledge of accounting to assist them in their business careers. The minor requires the completion of 15 specific hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include the following courses:
  ACCT 3013 Accounting View of Economic Events
  ACCT 3533 Accounting Technology
  ACCT 3613 Managerial Uses of Accounting Information
  ACCT 3723 Financial Reporting and Analysis
  ACCT 3843 Fundamentals of Taxation

Students who desire to earn an Accounting minor must notify the Walton College Undergraduate Programs Office of intent to pursue a
minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

SEE PAGE 310 FOR ACCOUNTING (ACCT) COURSES
SEE PAGE 325 FOR BUSINESS LAW (BLAW) COURSES

<table>
<thead>
<tr>
<th>ECONOMICS (ECON)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Ziegler</td>
</tr>
<tr>
<td>Department Chair</td>
</tr>
<tr>
<td>402 WCOB</td>
</tr>
<tr>
<td>479-575-ECON (3266)</td>
</tr>
</tbody>
</table>

• Phillips Petroleum Company Chair of International Business and Economics Distinguished Professor Murray
• Margaret Gerg and R.S. Martin, Jr. Chair in Business and Professor Farmer
• Lewis E. Epley Jr. Professorship and Professor Ferrier
• Professors Britton, Curington, Dixon, Gay, Ziegler
• Associate Professors Horowitz, Kali
• Assistant Professors Deck, Lee, Mendez, Reyes
• Clinical Associate Professor Stapp
• Visiting Assistant Professors Collins, Littrell

The department of economics offers two concentrations within the business economics major:
1) business economics
2) international economics and business.

The concentration in business economics is intended for those students who are interested primarily in business, but at the same time have a desire to understand the more advanced tools of economic analysis. Such a background is excellent preparation for careers in corporate research and planning, as well as careers with government and regulatory agencies, for graduate study in business and economics, and for law school. Students who want to pursue an advanced degree in business economics can, with appropriate planning, complete a master’s degree at the University of Arkansas within 12 months after receiving a B.S.B.A. degree. Please see the economics department chair for more information.

The international economics and business concentration is intended for students who wish to learn more about the international aspects of economics and business. It provides preparation for a broad range of careers in business, including management, marketing, and finance.

It is strongly recommended that economics majors who plan to continue their studies at the graduate level take two semesters of calculus (MATH 2554 and MATH 2564) and linear algebra (MATH 3083). These courses will substitute for the math courses required within Walton College core (MATH 2043 and MATH 2053).

**Business Economics Concentration**
The major in Business Economics requires 24 hours of major and collateral courses in the discipline as well as satisfying the other requirements for the B.S.B.A. degree. A maximum of 27 hours is allowed in a WCOB major or discipline field of study (i.e., core, major, electives) unless the extra courses are part of an interdisciplinary minor or collateral track. See an adviser for selection of courses.

The courses required for the business economics concentration include those required in Walton College and Fulbright College. In addition, 15 hours of specified courses (listed below) are required:

<table>
<thead>
<tr>
<th>Course Requirements in the concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3033 Microeconomic Theory</td>
</tr>
<tr>
<td>ECON 3133 Macroeconomic Theory</td>
</tr>
<tr>
<td>ECON 4333 Economics of Organizations</td>
</tr>
<tr>
<td>ECON 4743 Intro. to Econometrics, or</td>
</tr>
<tr>
<td>ECON 4753 Forecasting</td>
</tr>
<tr>
<td>Nine hours of ECON 3000/4000</td>
</tr>
<tr>
<td>Collateral Course</td>
</tr>
<tr>
<td>(may be selected from MATH 2103, MATH</td>
</tr>
<tr>
<td>2564, MATH 2574, AGEC 3413, AGEC</td>
</tr>
<tr>
<td>4413, GEOG 3353, and any upper division</td>
</tr>
<tr>
<td>course in ACCT, FINN, ISYS, MGMT, MKTG,</td>
</tr>
<tr>
<td>MATH, and STAT)</td>
</tr>
</tbody>
</table>

Junior- senior-level electives within Walton College
(Only six hours are permitted within major field of economics)

**Total Walton College Requirements**
60

**Total Degree Requirements**
126

**International Economics and Business Concentration**
The major in International Economics requires 21 hours of major and collateral courses in the discipline as well as satisfying the other requirements for the B.S.B.A. degree. A maximum of 27 hours is allowed in a WCOB major or discipline field of study (i.e., core, major, electives) unless the extra courses is part of an interdisciplinary minor or collateral track. See an adviser for selection of courses.

The courses required for the international economics and business concentration include those required in Walton College and Fulbright College. In addition, 21 hours of economics and business courses, nine hours of upper-division courses in the Fulbright College, and six hours of a single foreign language at the intermediate level or above, and three hours at the upper-division level in business communications, or equivalent, in the same foreign language are specified.

<table>
<thead>
<tr>
<th>Course Requirements in the concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3033 Microeconomic Theory</td>
</tr>
<tr>
<td>ECON 3133 Macroeconomic Theory</td>
</tr>
<tr>
<td>ECON 4633 International Trade</td>
</tr>
<tr>
<td>ECON 4643 International Macroeconomics</td>
</tr>
<tr>
<td>and Finance</td>
</tr>
</tbody>
</table>

International Business and ECON electives
Select two classes (six hours) from the following:
FINN 3703 International Finance
MGMT 4583 International Management
MKTG 4833 International Marketing
TLOG 4643 International Transportation and Logistics
ECON 4653 Global Competition and Strategy

**University Core**
35

**Additional University Core**
9

**Walton College Core Requirements**
33
(See page 203)

**Course Requirements in the concentration**
21
ECON 3033 Microeconomic Theory
ECON 3133 Macroeconomic Theory
ECON 4633 International Trade
ECON 4643 International Macroeconomics

**International Business and ECON electives**
6
Select two classes (six hours) from the following:
FINN 3703 International Finance
MGMT 4583 International Management
MKTG 4833 International Marketing
TLOG 4643 International Transportation and Logistics
ECON 4653 Global Competition and Strategy
Foreign Language Requirements
Students whose native language is English or whose native language is not taught at the University of Arkansas must complete nine hours of university course work in a single foreign language — six hours of intermediate language and three hours of upper-division course work in communications and business language, or equivalent. Students who, on the basis of prior knowledge of language, omit one or both courses in the intermediate language sequence — FLAN 2003, FLAN 2013 — may receive degree credit for omitted courses if they validate their higher placement by passing the business language course (or equivalent) with a grade of “C” or above. Students with no previous foreign language training or only rudimentary knowledge of a foreign language will be required to complete up to six hours of elementary language — FLAN 1003, FLAN 2003 — in addition to the nine hours of language specified above.

Students may select one of the following language tracks:
- Arabic – ARAB 2003, ARAB 2013, ARAB 3003, ARAB 3013 or equivalent
- Chinese – CHIN 2003, CHIN 2013, CHIN 3033, and any other upper division CHIN
- French – FREN 2003, FREN 2013, FREN 4333, FREN 3033 or FREN 3003
- German – GERM 2003, GERM 2013, GERM 3003, and GERM 4333
- Italian – ITAL 2003, ITAL 2013, ITAL 3003, and ITAL 3013
- Japanese – JAPN 2003, JAPN 2013, JAPN 3003, and JAPN 3013
- Spanish – SPAN 2003, SPAN 2013, SPAN 3003, and SPAN 4333

Students whose native language is not English but is taught at the University of Arkansas must select a third language from the list above, or substitute six hours of upper-division English language courses (i.e., speech, writing, or U.S. literature), to be selected with the consent of the international business adviser. Those students whose native language is not taught at the University of Arkansas will normally be required to select a third language.

Area Studies Requirements
For students taking a foreign language, nine hours of upper-division course work in the J. William Fulbright College of Arts and Sciences are required. Domestic students can satisfy this requirement in one of three ways:

1) any upper division foreign language course,
2) minor in a foreign language, and/or
3) select upper division courses related to the foreign language to include:
   - Arabic – any upper division course for Middle Eastern Studies (MEST) to include MEST 4003, MEST 4003H or additional courses listed under MEST in the university catalog
   - Chinese/Japanese/Asian Studies – any upper division course for Asian Studies (AIST)
   - French – any upper division course for EUST
   - German – any upper division course for EUST
   - Italian – any upper division course for EUST
   - Spanish – any upper division course for Latin American Studies (LAST) or European Studies (EUST) to include LAST 4003, LAST 4003H, or LAST 470V or additional courses listed under LAST in the university catalog, or EUST 399VH, EUST 4003, EUST 4003H, EUST 470V, or EUST 470VH or additional courses listed under EUST in the University catalog.

International students may satisfy this requirement in one of two ways:
1) For students who choose to take a third language, area studies requirements are the same as those for domestic students.
2) For students who choose to take six hours of upper division English to satisfy their language requirement, 9 hours of upper division course work in the J. William Fulbright College of Arts and Sciences pertaining to the United States to include any upper division course for American Studies (AMST) listed in the university catalog.

Junior-senior-level electives within Walton College

General Education Electives

Total Degree Requirements

Economics Eight-Semester Degree Program:
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The Economics major has two concentrations: Business Economics, and International Economics and Business. The eight-semester plans for both are listed below. Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

Business Economics Concentration

Fall Semester 1
3 ENGL 1013 Composition I** - University Core
3 MATH 2053 Finite Math – University Core
3 COMM 1313 Speech Communication
1 WCOB 1111 Freshman Business Connections
2 WCOB 1012 Legal Environment of Business*
0 WCOB 1120 Computer Competency Requirement
3 U.S. History or Political Science – University Core
15 semester hours
<table>
<thead>
<tr>
<th>Semester 1</th>
<th>University of Arkansas, Fayetteville</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ENGL 1023 Composition II** - University Core</td>
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</tr>
<tr>
<td>3 WCOB 1023 Business Foundations</td>
<td></td>
</tr>
<tr>
<td>3 WCOB 1033 Data Analysis</td>
<td></td>
</tr>
<tr>
<td>3 ECON 2023 Microeconomics – University Core</td>
<td></td>
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<tr>
<td>3 Natural Science – University Core</td>
<td></td>
</tr>
<tr>
<td>16 semester hours</td>
<td></td>
</tr>
</tbody>
</table>

** Fall Semester 2  
3 MATH 2043 Survey of Calculus**  
3 ECON 2013 Macroeconomics** - University Core  
6 Select TWO of the following:  
   - WCOB 2013 Markets and Consumers  
   - WCOB 2023 Production and Delivery of Goods and Services  
   - WCOB 2033 Acquiring and Managing Human Resources  
   - WCOB 2043 Acquiring and Managing Financial Resources  
3 Social Science – University Core  
3 Fine Art/Humanities – University Core  
18 semester hours  

ALL pre-business requirements should be met by end of spring term

Spring Semester 1  
3 ENGL 1023 Composition II - University Core  
3 WCOB 1023 Business Foundations  
3 WCOB 1033 Data Analysis  
3 ECON 2023 Microeconomics – University Core  
3 Natural Science – University Core  
16 semester hours

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>University of Arkansas, Fayetteville</th>
</tr>
</thead>
</table>
| 3 MATH 2043 Survey of Calculus**  
3 ECON 2013 Macroeconomics** - University Core  
6 Select TWO of the following:  
   - WCOB 2013 Markets and Consumers  
   - WCOB 2023 Production and Delivery of Goods and Services  
   - WCOB 2033 Acquiring and Managing Human Resources  
   - WCOB 2043 Acquiring and Managing Financial Resources  
3 Social Science – University Core  
3 Fine Art/Humanities – University Core  
18 semester hours  

Fall Semester 3  
3 ECON 3033 Microeconomic Theory  
3 ECON elective – see page 204  
6 WCOB 3016 Business Strategy and Planning  
3 Junior Senior Business Elective  
15 semester hours

Spring Semester 3  
3 ECON 3133 Macroeconomic Theory  
3 ECON elective – see page 204  
6 Junior Senior Business Electives  
3 ENGL 2003 or ENGL 2013 or General Education Elective if Advanced Composition Requirement has already been met**  
15 semester hours

Fall Semester 4  
3 ECON 4333 Economics of Organizations  
3 ECON elective – see page 204  
3 Collateral Course – see page 203  
7 General Education Electives  
16 semester hours

Spring Semester 4  
3 ECON 4743 Introduction to Econometrics or ECON 4753 Forecasting  
6 General Education Electives  
6 Junior Senior Business Electives  
15 semester hours  

126 total hours

International Economics and Business Concentration

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>University of Arkansas, Fayetteville</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ENGL 1013 Composition I - University Core</td>
<td></td>
</tr>
<tr>
<td>3 MATH 2053 Finite Math – University Core</td>
<td></td>
</tr>
<tr>
<td>3 COMM 3131 Speech Communication</td>
<td></td>
</tr>
<tr>
<td>1 WCOB 1111 Freshman Business Connections</td>
<td></td>
</tr>
<tr>
<td>2 WCOB 1012 Legal Environment of Business*</td>
<td></td>
</tr>
<tr>
<td>0 WCOB 1120 Computer Competency Requirement</td>
<td></td>
</tr>
<tr>
<td>3 FLAN 2003 Intermediate Foreign Language I</td>
<td></td>
</tr>
<tr>
<td>15 semester hours</td>
<td></td>
</tr>
</tbody>
</table>

Fall Semester 2  
3 MATH 2043 Survey of Calculus**  
3 ECON 2013 Macroeconomics** - University Core  
6 Select TWO of the following:  
   - WCOB 2013 Markets and Consumers  
   - WCOB 2023 Production and Delivery of Goods and Services  
   - WCOB 2033 Acquiring and Managing Human Resources  
   - WCOB 2043 Acquiring and Managing Financial Resources  
3 Social Science – University Core  
3 U.S. History or Political Science – University Core  
18 semester hours

Spring Semester 2  
3 Fine Art/Humanities – University Core  
3 Business Social Science  
3 Natural Science – University Core  
6 Select TWO of the following not completed in previous semester:  
   - WCOB 2013 Markets and Consumers  
   - WCOB 2023 Production and Delivery of Goods and Services  
   - WCOB 2033 Acquiring and Managing Human Resources  
   - WCOB 2043 Acquiring and Managing Financial Resources  
16 semester hours  

Fall Semester 3  
3 ECON 3033 Microeconomic Theory  
3 ECON or collateral elective – see page 203  
6 WCOB 3016 Business Strategy and Planning  
3 Junior Senior Business Elective  
15 semester hours

Spring Semester 3  
3 ECON 3133 Macroeconomic Theory  
3 ECON 4633 International Trade Policy  
3 Area Studies Course – see page 213  
3 Junior Senior Business Elective  
3 ENGL 2003 or ENGL 2013 or General Education Elective if Advanced Composition Requirement has already been met**  
15 semester hours

Fall Semester 4  
3 ECON 4643 International Monetary Policy  
3 International Economics/Business elective – see page 212
3 Area Studies Course – see page 213
1 General Education Elective
4 Natural Science – University Core
3 Junior Senior Business Elective
17 semester hours

Spring Semester 4
3 International Economics/Business elective – see page 212
3 ECON or collateral elective – see page 212
3 Area Studies Course – see page 213
6 Junior Senior Business Elective
15 semester hours

126 total hours

* Must be completed prior to fall semester of sophomore year
** Must be completed prior to fall semester of junior year
*** Must be completed prior to fall semester of senior year

Economics Minor for Business Students:
The Department of Economics offers a minor for Walton College students desiring more knowledge of economics to assist them in their business careers. The minor requires completion of 15 hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include the following courses:
- ECON 2013 Principles of Macroeconomics
- ECON 2023 Principles of Microeconomics
- Plus nine hours of upper division course work in economics.

Students who desire to earn an Economics minor must notify the Walton College Undergraduate Programs Office of their intent to pursue a minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

FINANCE (FINN)
Wayne Y. Lee
Department Chair and Garrison Chair in Finance and Alice L. Walton Chair in Finance
302 WCOB
479-575-4505

- Bellamy Chair of Banking and Professor Dominic
- Garrison Chair in Finance and Alice L. Walton Chair in Finance and Professor Lee
- Dillard Department Store Chair in Corporate Finance and Professor Millar
- Harold A. Dulan Finance Chair in Capital Formation and Robert E. Kennedy Chair in Finance and Professor Liu
- Arkansas Bankers Association Chair in Banking and Associate Professor Yeager
- Associate Professors Hearth, Perry
- Assistant Professors Jandik, Kruse, Rennie
- Instructors Driver, Risk

The academic mission of the department of finance is to provide an educational experience that:
- stimulates student learning through open dialogue and informative discussion both inside and outside the classroom;
- actively engages students in their own learning through problem-based casework, participation in real-world business activities, and internships in the financial community; and
- prepares students to successfully meet the rigors of the challenging and diverse career opportunities in finance.

Finance Major
Students who elect to major in finance can choose from one of five concentrations: banking; financial management/investment; insurance; real estate, and personal financial management. This choice should reflect the student’s primary career focus and electives should be used to complement the coursework in the chosen concentration. Careers in finance that are analytically oriented will generally require proficiency in accounting, economics, and quantitative methods. In contrast, careers in finance that are sales or management oriented will generally require marketing and management skills. Finance majors are strongly encouraged to consult with departmental faculty advisers and/or the department chair in developing their curriculum.

Finance Major Requirements with Concentrations
Complete the requirements for a B.S.B.A. degree as listed on page 202.

Total General Education
Walton College Core Requirements
(See page 203)

Courses Required in All Concentrations
FINN 3013 Financial Analysis and Valuation
FINN 3053 Financial Markets and Institutions
FINN 3703 International Finance

NOTE: These required courses represent a common body of knowledge for all finance majors and should be taken prior to coursework specified in concentrations within the major.

Concentration I: Banking
FINN 3103 Financial Modeling
FINN 3133 Commercial Banking
FINN 4313 Advanced Commercial Bank Management

Finance or interdisciplinary electives

Concentration II: Financial Management/Investment
FINN 3103 Financial Modeling

Plus one of the following options (six hours):

Option 1: Any two of the four courses listed below
FINN 3063 Investments
FINN 3603 Corporate Finance
FINN 4133 Advanced Investments
FINN 4233 Advanced Corporate Finance

Option 2:
FINN 4143 Portfolio Management I
FINN 4153 Portfolio Management II

Option 3:
FINN 4163 Fixed Income Securities I
FINN 4173 Fixed Income Securities II
Finance or interdisciplinary electives

Concentration III: Insurance
FINN 3623 Risk Management
FINN 4733 Life/Health Insurance I
FINN 4833 Property/Casualty Ins. I
Finance or interdisciplinary electives

Concentration IV: Real Estate
FINN 3933 Real Estate Principles
FINN 4413 Real Estate Investment and Appraisal
FINN 4433 Real Estate Finance
Finance or interdisciplinary electives

University of Arkansas, Fayetteville
Concentration V: Personal Financial Management

FINN 3003 Personal Financial Management 3
FINN 3063 Investments 3
FINN 3623 Risk Management 3
FINN 4013 Seminar in Financial Planning 3
FINN 4733 Life and Health Insurance I 3

The following courses are strongly recommended for the Personal Financial Management concentration and may be used towards the junior/senior business elective requirements:

ACCT 3843 Fundamentals of Taxation 3
ACCT 5883 Individual Tax Planning 3

The highly recommended courses listed below satisfy the six credit hour interdisciplinary requirement in the major:

Accounting
ACCT 3013 Accounting View of Economic Events 3
ACCT 3723 Financial Reporting and Analysis 3

Economics
ECON 3733 Experimental Economics 3

Information Systems
ISYS 2263 Intro to Information Systems Dev. 3
ISYS 3373 End User Computing 3

Management
MGMT 4433 Small Enterprise Management 3
MGMT 3933 Entrepreneurship and New Venture Development 3

Marketing
MKTG 4133 Marketing Research 3
MKTG 4533 Consumer Behavior 3

Transportation and Logistics
TLOG 3613 Business Logistics 3
TLOG 3623 Purchasing and Inventory Systems 3

Junior-senior-level electives within Walton College
(Only six hours are permitted within finance)
15 semester hours

Total Walton College Requirements 60
Total Degree Requirements 126

Finance Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The Finance major has five concentrations:

• Banking
• Insurance
• Financial Management and Investment
• Personal Financial Management
• Real Estate

The eight-semester plan for the Banking concentration is listed below as an example, and the other eight-semester plans are available in Section 2 of the Catalog of Studies, online at http://catalogofstudies.uark.edu.

Courses in **BOLD** must be taken in the designated semester. Courses in *ITALIC* may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

Fall Semester 1
3 ENGL 1013 Composition I** - University Core
3 MATH 2053 Finite Math – University Core

Spring Semester 1
3 ENGL 1023 Composition II** - University Core
3 ECON 2013 Macroeconomics** - University Core
6 Select TWO of the following:
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
3 Social Science – University Core
3 Fine Art/Humanities – University Core
18 semester hours

Fall Semester 2
3 MATH 2043 Survey of Calculus**
3 ECON 3733 Experimental Economics 3
6 Select TWO of the following not completed in previous semester (6 hours):
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
16 semester hours

ALL pre-business requirements should be met by end of spring term.
Spring Semester 4  
3 FINN 4313 Advanced Commercial Banking  
3 Finance or Interdisciplinary Electives  
3 Junior Senior Business Elective  
6 General Education Electives  
15 semester hours  

126 total hours  

* Must be taken prior to fall semester of sophomore year  
** Must be taken prior to fall semester of junior year  
*** Must be taken prior to fall semester of senior year  

Finance Minors for Business Students:  
The Department of Finance offers two minor options for Walton College students in the areas of Banking/Financial Management/Investment and Insurance/Real Estate. The minors require completion of 15 hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include the following options and courses:  

1. Banking/Financial Management/Investment  
   FINN 3013 Financial Analysis and Valuation 3  
   Plus two (six hours) of the following courses 6  
   FINN 3053 Financial Markets and Institutions 3  
   FINN 3103 Financial Modeling 3  
   FINN 3703 International Finance 3  
   Plus two (six hours) of the following courses 6  
   FINN 3063 Investments 3  
   FINN 3133 Commercial Banking 3  
   FINN 3603 Corporate Finance 3  
   FINN 4133 Advanced Investment 3  
   FINN 4233 Advanced Corporate Finance 3  
   FINN 4313 Advanced Commercial Banking 3  
   **Total 15**  

2. Insurance/Real Estate  
   Choose any five classes (fifteen hours) of the following courses 15  
   FINN 3003 Personal Financial Management 3  
   FINN 3623 Risk Management 3  
   FINN 4733 Life and Health Insurance I 3  
   FINN 4833 Property and Casualty Insurance I 3  
   FINN 3933 Real Estate Principles 3  
   FINN 4413 Real Estate Investment and Appraisal 3  
   FINN 4433 Real Estate Finance 3  
   **Total 15**  

Students who desire to earn a Finance minor must notify the Walton College Undergraduate Programs Office of their intent to pursue a minor. All requirements for a minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.  

NOTE: Course requirements in the Information Systems major total 24 credit hours. Because of prerequisites, students should allow two full years (24 months) to complete this coursework. Prerequisites are strictly enforced.  

- Complete the requirements for a B.S.B.A. degree as listed on page 202. Programming I (CSCE 1023/1021) is recommended as a general education elective.  

**Total General Education** 60  
**Walton College Core Requirements** 33  
(See page 203)  

**Course Requirements in the Major** 24  
- ISYS 2263 Intro. to IS Development 3  
- ISYS 3253 IT Infrastructure 3  
- ISYS 3293 System Analysis and Design 3  
- ISYS 3393 Business Applications in Visual Basic 3  
- ISYS 4283 Centralized Data Systems 3  
- ISYS 4293 Business Intelligence 3  
- ISYS 4363 Business Application Systems Development 3  
- ISYS 4373 Object Oriented Programming 3  
- Junior- senior-level electives or interdisciplinary minor within Walton College 15  
(Only three hours are permitted within major field of ISYS unless student selects an interdisciplinary minor)
Information Systems Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan for Information Systems should see page 42 in the Academic Regulations chapter for university requirements of the program. Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

**Fall Semester 1**
3 ENGL 1013 Composition I** - University Core
3 MATH 2053 Finite Math – University Core
3 COMM 1313 Speech Communication
1 WCOB 1111 Freshman Business Connections
2 WCOB 1012 Legal Environment of Business*
0 WCOB 1120 Computer Competency Requirement
3 FLAN 2003 Intermediate Foreign Language I
15 semester hours

**Spring Semester 1**
3 ENGL 1023 Composition II** - University Core
3 WCOB 1023 Business Foundations
3 WCOB 1033 Data Analysis
3 ECON 2023 Microeconomics – University Core
4 Natural Science – University Core
16 semester hours

**Fall Semester 2**
3 MATH 2043 Survey of Calculus**
3 ECON 2013 Macroeconomics** - University Core
3 Social Science – University Core
6 Select TWO of the following:
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
3 Fine Art/Humanities – University Core
18 semester hours

**Spring Semester 2**
3 Fine Art/Humanities – University Core
4 Natural Science – University Core
3 ISYS 2263 Intro to Information Systems Development
3 Social Science – University Core
6 Select TWO of the following not completed in previous semester:
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
16 semester hours

ALL pre-business requirements should be met by end of spring term

**Fall Semester 3**
3 ISYS 3293 Systems Analysis and Design
3 ISYS 3393 Business Application Dev. in the Visual Basic Environment
6 WCOB 3016 Business Strategy and Planning
3 Business Social Science
15 semester hours

**Spring Semester 3**
3 ISYS 3253 Information Technology Infrastructure
3 ISYS 4373 Object Oriented Programming for Business Applications
6 Junior Senior Business Electives
3 ENGL 2003 or ENGL 2013 or General Education Elective if Advanced Composition Requirement has already been met***
15 semester hours

**Fall Semester 4**
3 ISYS 4283 Centralized Database Systems
7 General Education Electives
6 Junior Senior Business Electives
16 semester hours

**Spring Semester 4**
3 ISYS 4293 Business Intelligence
3 ISYS 4363 Business Application System Development
6 General Education Electives
3 Junior Senior Business Elective
15 semester hours

126 total hours

* Must be taken prior to fall semester of sophomore year
** Must be taken prior to fall semester of junior year
***Must be taken prior to fall semester of senior year

Information Systems Minor for Business Students:

The Department of Information Systems offers a minor for Walton College students desiring more knowledge of information systems to assist them in their careers. The minor requires completion of 15 hours of study with all of the courses applied toward the minor in residence. The 15 hours include the following courses:
  ISYS 2263 Intro. to Information Systems Development
  ISYS 3253 IT Infrastructure
  ISYS 3293 System Analysis and Design
  ISYS 3393 Business Applications and Visual Basic
  Plus one of the following:
  ISYS 4373 Object Oriented Programming
  ISYS 4283 Centralized Data Systems
  ISYS 4293 Business Intelligence
  WCOB 4213 ERP Fundamentals

Students who desire to earn an Information Systems minor must notify the Walton College Undergraduate Programs Office of intent to pursue a minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

SEE PAGE 368 FOR INFORMATION SYSTEMS (ISYS) COURSES

**MANAGEMENT (MGMT)**

Anne O’Leary-Kelly
Department Chair and William R. and Cacilia Howard Chair In Management
402 WCOB
479-575-4566

- Charles C. Fichtner Chair in Management and Professor Ganster
- Raymond F. Orr Chair and Professor Gupta
- William R. and Cacilia Howard Chair and Professor O’Leary-Kelly (A.)
• Professors Todd, White
• Associate Professors Anand, Delery, Ellstrand, Johnson, Reeves
• Instructor Newman

Management is the force responsible for directing organizations toward goals or objectives. Therefore, the management curriculum focuses on the nature and capabilities of human and other resources, as well as how the manager plans, organizes, staffs, coordinates, and evaluates those resources in an organization and its environment. The study of management prepares men and women for positions of leadership in profit and nonprofit organizations of all sizes. Management majors gain insight and skill needed for careers as professional managers or as self-employed entrepreneurs. These skills include technical knowledge, communicative capacity, human understanding, and conceptual and problem-solving ability. Two majors are offered in the management department: management and general business. Both majors are described below.

Management Major

Students may choose from among three concentrations: Human Resource Management, Small Business and Entrepreneurship, and Organizational Leadership. All management majors must complete MGMT 4243, Ethics and Corporate Responsibility. An additional 21 hours of credit are required for students majoring in management. Six of these credit hours are specified in the concentration. Beyond this, students can choose from specified management and non-management courses in order to complete the requirements for the major.

The Human Resource Management concentration is designed to prepare students for careers in human resource-related occupations. Among issues and areas addressed are management-employee relations, quality of work life, compensation and other reward systems, organizational staffing, and training and development. The Human Resource Management track emphasizes the importance of integrating individual goals and organizational objectives.

The Small Business and Entrepreneurship concentration is suggested for students who are interested in starting and/or operating a small business or independent company after graduation. The Small Business and Entrepreneurship focus provides excellent preparation for students wishing to obtain a highly integrated view of business operations. The Organizational Leadership concentration prepares new students for leadership positions within organizations. Among the topics explored are employee motivation, how to manage power and influence within organizations, developing effective teams, managing diversity, organizational transformation and change, and globalization.

Management Major Requirements

The major in management requires 24 hours of major and collateral courses in the discipline as well as satisfying the other requirements for the B.S.B.A. degree. A maximum of 27 hours is allowed in a WCOB major or discipline field of study (i.e., core, major, electives) unless the extra courses are part of an interdisciplinary minor or collateral track. See an adviser for selection of courses.

Complete the requirements for a B.S.B.A. degree as listed on page 202.

Total General Education 60
College Core Requirements 33
Courses Required 24

Concentration I: Human Resources Management

MGMT 4943 Organizational Staffing 3
MGMT 4953 Organizational Rewards/Compensation 3

MGMT 4243 Ethics and Corporate Responsibility 3

Select at least two classes (six hours) from the following courses:

- MGMT 4253 Leadership 3
- MGMT 4263 Organizational Change and Development 3
- MGMT 3933 Entrepreneurship/New Venture 3
- MGMT 4103 Special Topics 3
- MGMT 4433 Small Enterprise Management 3
- MGMT 4583 International Management 3
- MGMT 4993 Entrepreneurship Practicum 3

Select up to three classes (nine hours) from the following courses:

- ECON 3533 Labor Economics 3
- ECON 3433 Managerial Economics 3
- ACCT 3613 Managerial Uses of Accounting Information 3
- ISYS 2263 Intro to Information Systems Dev. 3
- ISYS 3373 End User Computing 3
- ISYS 4263 Information Technology Strategy 3
- MKTG 4553 Consumer Behavior 3
- MKTG 4133 Marketing Research 3
- MKTG 4533 Marketing Management 3

Concentration II: Organizational Leadership

MGMT 4253 Leadership 3
MGMT 4263 Organizational Change and Development 3
MGMT 4243 Ethics and Corporate Responsibility 3

Select at least two classes (six hours) from the following courses:

- MGMT 3933 Entrepreneurship/New Venture 3
- MGMT 4103 Special Topics 3
- MGMT 4433 Small Enterprise Management 3
- MGMT 4583 International Management 3
- MGMT 4943 Organizational Staffing 3
- MGMT 4953 Orgn Rewards/Compensation 3

Select up to three classes (nine hours) from the following courses:

- ACCT 3613 Managerial Uses of Accounting 3
- ACCT 3013 Views of Economic Events 3
- ECON 3533 Labor Economics 3
- ECON 4333 Managerial Economics 3
- ECON 4643 International Macroeconomics and Finance 3
- ECON 4653 Global Competition and Strategy 3
- FINN 3603 Intermediate Financial Management 3
- FINN 3703 International Finance 3
- ISYS 2263 Intro to Information Systems Dev. 3
- ISYS 4263 Information Technology Strategy 3
- ISYS 4933 Global Information Technology Management 3
- MKTG 4533 Marketing Management 3
- MKTG 4833 International Marketing 3
- TLOG 3613 Business Logistics 3
- TLOG 4643 International Transportation and Logistics 3
- TLOG 4653 Transportation and Logistics Strategy 3
Concentration III: Small Business and Entrepreneurship

Required courses:
- MGMT 3933 Entrepreneurship/New Venture 3
- MGMT 4243 Ethics and Corporate Responsibility 3
- MGMT 4433 Small Enterprise Mgmt. 3

Select at least two classes (six hours) from the following courses:
- MGMT 4103 Special Topics 3
- MGMT 4253 Leadership 3
- MGMT 4263 Organizational Change and Development 3
- MGMT 4433 Small Enterprise Management 3
- MGMT 4583 International Management 3
- MGMT 4943 Organizational Staffing 3
- MGMT 4953 Orgn Rewards/Compensation 3

Select up to three classes (nine hours) from the following courses:
- ACCT 3843 Fundamentals of Taxation 3
- BLAW 3033 Commercial Law 3
- FINN 3053 Financial Markets and Institutions 3
- FINN 3623 Risk Management 3
- FINN 3933 Real Estate Principles 3
- ISYS 2263 Intro to Information Systems Dev. 3
- MKTG 3533 Promotional Strategy 3
- MKTG 4033 Selling and Sales Management 3
- MKTG 4553 Consumer Behavior 3
- MKTG 4833 International Marketing 3
- MKTG 4933 Retail Marketing Strategies 3
- TLOG 3613 Business Logistics 3
- TLOG 3623 Purchasing and Inventory Systems 3
- TLOG 4653 Transportation and Logistics 3
- Strategy 3

Junior-senior-level electives within Walton College 15
(Only six hours are permitted within MGMT, subject to the constraint that no more than 27 total hours are in MGMT)

Total College Requirements 60

Total Degree Requirements 126

Management Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The Management major has three concentrations:

- Human Resources Management
- Organizational Leadership
- Small Business and Entrepreneurship

The eight-semester plan for the Human Resources Management concentration is listed below as an example, and the other eight-semester plans are available in Section 2 of the Catalog of Studies, online at http://catalogofstudies.uark.edu.

Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

Fall Semester 1
- 3 ENGL 1013 Composition I** - University Core
- 3 MATH 2053 Finite Math** – University Core
- 3 COMM 1313 Speech Communication
- 1 WCOB 1111 Freshman Business Connections
- 2 WCOB 1012 Legal Environment of Business*
- 0 WCOB 1120 Computer Competency Requirement
- 3 U.S. History or Political Science – University Core

15 semester hours

Spring Semester 1
- 3 ENGL 1023 Composition II** - University Core
- 3 WCOB 1023 Business Foundations
- 3 WCOB 1033 Data Analysis
- 3 ECON 2023 Microeconomics – University Core
- 4 Natural Science – University Core

16 semester hours

Fall Semester 2
- 3 MATH 2043 Survey of Calculus**
- 3 ECON 2013 Macroeconomics** - University Core
- 6 Select TWO of the following:
  - WCOB 2013 Markets and Consumers
  - WCOB 2023 Production and Delivery of Goods and Services
  - WCOB 2033 Acquiring and Managing Human Resources
  - WCOB 2043 Acquiring and Managing Financial Resources
- 3 Social Science – University Core
- 3 Fine Art/Humanities – University Core

18 semester hours

Spring Semester 2
- 3 Fine Art/Humanities – University Core
- 3 Business Social Science
- 4 Natural Science – University Core
- 6 Select TWO of the following not completed in previous semester:
  - WCOB 2013 Markets and Consumers
  - WCOB 2023 Production and Delivery of Goods and Services
  - WCOB 2033 Acquiring and Managing Human Resources
  - WCOB 2043 Acquiring and Managing Financial Resources

16 semester hours

ALL pre-business requirements should be met by end of spring term

Fall Semester 3
- 3 MGMT 4243 Ethics and Corporate Responsibility
- 3 MGMT 4943 Organizational Staffing or MGMT 4953 Organizational Rewards and Compensation
- 6 WCOB 3016 Business Strategy and Planning
- 3 Junior Senior Business Elective

15 semester hours

Spring Semester 3
- 3 MGMT 4953 Organizational Rewards and Compensation or MGMT 4943 Organizational Staffing
- 6 MGMT or Collateral electives
- 3 Junior Senior Business Elective
- 3 ENGL 2003 or ENGL 2013 or General Education Elective 1F

Advanced Composition Requirement has already been met***

15 semester hours

Fall Semester 4
- 6 MGMT electives
- 3 Junior Senior Business Elective
- 7 General Education Electives
16 semester hours

Spring Semester 4
3 MGMT or collateral elective
6 Junior Senior Business Electives
6 General Education Electives
15 semester hours

126 total hours

* Must be taken prior to fall semester of sophomore year
** Must be taken prior to fall semester of junior year
*** Must be taken prior to fall semester of senior year

Management Minor for Business Students:
The Department of Management offers a minor for students desiring more knowledge of management to assist them in their careers. The minor requires completion of 15 hours of study with all of the courses applied toward the minor in residence. The 15 hours include the following courses:

- MGMT 4243 Ethics and Corporate Responsibility
- Plus 12 hours from the following courses:
  - MGMT 3933 Entrepreneurship/New Venture
  - MGMT 4253 Leadership
  - MGMT 4263 Organizational Change and Development
  - MGMT 4433 Small Enterprise Management
  - MGMT 4583 International Management
  - MGMT 4943 Organizational Staffing
  - MGMT 4953 Orgn. Rewards/Compensation
  - MGMT 4993 Entrepreneurship Practicum

Students who desire to earn a Management minor must notify the Walton College Undergraduate Programs Office of intent to pursue the minor. All requirements for the minor must be completed prior to the awarding of a student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

General Business Major
General Business is the broadest major in Walton College. This program provides the student exposure to all facets of the business process. Maximum flexibility is retained by the student. At the same time, careful use of general and junior/senior business electives allows the student to concentrate additional course work in one or more selected functional areas.

General Business Major Requirements
Complete the requirements for a B.S.B.A. degree as listed on page 202.

| Total General Education | 60 |
| Walton College Core Requirements | 33 |
| Course Requirements in the Major | 24 |

Select one from each of the following six groups. Sequencing of courses will be determined by choices made.

**Group 1**
- MGMT 3933 Entrepreneurship/New Venture 3
- MGMT 4243 Ethics and Corporate Responsibility 3
- MGMT 4253 Leadership 3
- MGMT 4263 Organizational Change and Development 3
- MGMT 4433 Small Enterprise Development 3
- MGMT 4943 Organizational Staffing 3
- MGMT 4953 Orgn. Rewards/Compensation 3

**Group 2**
- ACCT 3013 Accounting View of Economic Events 3
- ACCT 3533 Accounting Technology 3
- ACCT 3613 Mgrl. Uses of Acctg. Info. 3
- ACCT 3723 Financial Reporting and Analysis 3

**Group 3**
- WCOB 4213 ERP Fundamentals 3
- ISYS 2263 Introduction to Information Systems Development 3
- ISYS 3373 End User Computing 3
- ISYS 4263 IT Strategy 3
- ISYS 4933 Global IT 3

**Group 4**
- ECON 3033 Microeconomics Theory 3
- ECON 3133 Macroeconomics Theory 3
- ECON 3533 Labor Economics 3
- ECON 4333 Economics of Organizations 3
- ECON 4633 International Trade 3
- ECON 4643 International Macroeconomics and Finance 3
- ECON 4653 Global Competition and Strategy 3

**Group 5**
- FINN 3053 Financial Markets/Institutions 3
- FINN 3063 Principles of Investments 3
- FINN 3623 Risk Management 3
- FINN 4233 Advanced Corporate Finance 3

**Group 6**
- MKTG 3533 Promotional Strategy 3
- MKTG 4553 Consumer Behavior 3
- MKTG 4933 Retail Marketing Strategy 3
- Six hours 3000/4000 business courses 6

**Junior-senior-level electives within Walton College**
(Only three hours are permitted in any one department.)
Total Walton College Requirements 60
Total Degree Requirements 126

General Business Eight-Semester Degree Program:
Students wishing to follow the eight-semester degree plan for General Business should see page 42 in the Academic Regulations chapter for university requirements of the program.

Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

**Fall Semester 1**
- 3 ENGL 1013 Composition I** - University Core
- 3 MATH 2053 Finite Math – University Core
- 3 COMM 1313 Speech Communication
- 1 WCOB 1111 Freshman Business Connections
- 2 WCOB 1012 Legal Environment of Business
- 1 WCOB 1012 Legal Environment of Business

**Spring Semester 1**
- 3 ENGL 1023 Composition II** - University Core
Fall Semester 2
3 MATH 2043 Survey of Calculus **
3 ECON 2013 Macroeconomics** - University Core
6 Select TWO of the following:
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
3 Social Science – University Core
3 Fine Art/Humanities – University Core
18 semester hours

Spring Semester 2
3 Fine Art/Humanities – University Core
3 Business Social Science
4 Natural Science – University Core
6 Select TWO of the following not completed in previous semester:
  WCOB 2013 Markets and Consumers
  WCOB 2023 Production and Delivery of Goods and Services
  WCOB 2033 Acquiring and Managing Human Resources
  WCOB 2043 Acquiring and Managing Financial Resources
16 semester hours

ALL pre-business requirements should be met by end of spring term

Fall Semester 3
3 Group 1 course
3 Group 2 course
6 WCOB 2016 Business Strategy and Planning
3 MKTG 3433 (Junior Senior Business Elective)
15 semester hours

Spring Semester 3
3 Group 3 course
3 Group 6 course
6 Junior Senior Business Electives
3 ENGL 2003 or ENGL 2013 or General Education Elective if Advanced Composition Requirement has already been met***
15 semester hours

Fall Semester 4
3 Group 5 course
6 Junior Senior Business Electives
7 General Education Electives
16 semester hours

Spring Semester 4
3 Group 4 course
6 General Education Electives
6 Junior Senior Business Elective
15 semester hours

Total 126 hours

* Must be taken prior to fall semester of sophomore year
** Must be taken prior to fall semester of junior year
*** Must be taken prior to fall semester of senior year
Majors must select one of the following concentrations and must complete twelve hours of course work in the elected concentration.

**Concentration I: Marketing Management**

Select twelve hours from the following:

- MKTG 3533 Promotional Strategy 3
- MKTG 4033 Selling and Sales Management 3
- MKTG 4103 Marketing Topics 3
- MKTG 4833 International Marketing 3
- MKTG 4933 Retail Marketing Strategy 3
- MKTG 4943 Retail Buying and Merchandise Control 3

**Concentration II: Retail Marketing**

MKTG 4933 Retail Marketing Strategy 3

Select two courses (six hours) from the following:

- MKTG 3533 Promotional Strategy 3
- MKTG 4033 Selling and Sales Management 3
- MKTG 4103 Marketing Topics 3
- MKTG 4833 International Marketing 3

**Junior-senior-level electives within Walton College**

(Only six hours are permitted within a major field)

Total Walton College Requirements 60

Total Degree Requirements 126

**Marketing Eight-Semester Degree Program:**

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program. The Marketing major has two concentrations: Marketing Management and Retail Marketing. The eight-semester plans for both are listed below.

Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

**Marketing Management Concentration**

**Fall Semester 1**

- 3 ENGL 1013 Composition I** - University Core
- 3 MATH 2053 Finite Math – University Core
- 3 COMM 1313 Speech Communication
- 1 WCOB 1111 Freshman Business Connections
- 2 WCOB 1012 Legal Environment of Business*
- 0 WCOB 1120 Computer Competency Requirement
- 3 U.S. History or Political Science – University Core

15 semester hours

**Spring Semester 1**

- 3 ENGL 1023 Composition II** - University Core
- 3 WCOB 1023 Business Foundations
- 3 WCOB 1033 Data Analysis
- 3 ECON 1023 Microeconomics – University Core
- 4 Natural Science – University Core

16 semester hours

**Fall Semester 2**

- 3 MATH 2043 Survey of Calculus**
- 3 ECON 2013 Macroeconomics** - University Core

6 Select TWO of the following:

- WCOB 2013 Markets and Consumers
- WCOB 2023 Production and Delivery of Goods and Services
- WCOB 2033 Acquiring and Managing Human Resources
- WCOB 2043 Acquiring and Managing Financial Resources
- 3 Social Science – University Core
- 3 Fine Art/Humanities – University Core

18 semester hours

**Spring Semester 2**

- 3 Fine Art/Humanities – University Core
- 3 Business Social Science
- 4 Natural Science – University Core

6 Select TWO of the following not completed in previous semester:

- WCOB 2013 Markets and Consumers
- WCOB 2023 Production and Delivery of Goods and Services
- WCOB 2033 Acquiring and Managing Human Resources
- WCOB 2043 Acquiring and Managing Financial Resources

16 semester hours

ALL pre-business requirements should be met by end of term

**Fall Semester 3**

- 3 MKTG 3433 Principles of Marketing
- 6 WCOB 3016 Business Strategy and Planning
- 6 Junior Senior Business Electives

15 semester hours

**Spring Semester 3**

- 3 MKTG 4133 Marketing Research
- 3 MKTG elective
- 6 Junior Senior Business Electives
- 7 General Education Electives

16 semester hours

**Fall Semester 4**

- 3 MKTG 4533 Consumer Behavior
- 6 MKTG electives
- 7 General Education Electives

15 semester hours

**Spring Semester 4**

- 3 MKTG 4553 Consumer Behavior
- 3 MKTG elective
- 6 Junior Senior Business Elective
- 6 General Education Electives

15 semester hours

126 total hours

**Retail Marketing Concentration**

**Fall Semester 1**

- 3 ENGL 1013 Composition I** - University Core
- 3 WCOB 1023 Business Foundations
- 3 ECON 1023 Microeconomics – University Core
- 4 Natural Science – University Core

16 semester hours

**Fall Semester 2**

- 3 MATH 2043 Survey of Calculus**
- 3 ECON 2013 Macroeconomics** - University Core

15 semester hours
Spring Semester 1
3 ENGL 1023 Composition II** - University Core
3 WCOB 1023 Business Foundations
3 WCOB 1033 Data Analysis
3 ECON 2023 Microeconomics – University Core
4 Natural Science – University Core
16 semester hours

Fall Semester 2
3 MATH 2043 Survey of Calculus **
3 ECON 2013 Macroeconomics** - University Core
6 Select TWO of the following:
   WCOB 2013 Markets and Consumers
   WCOB 2023 Production and Delivery of Goods and Services
   WCOB 2033 Acquiring and Managing Human Resources
   WCOB 2043 Acquiring and Managing Financial Resources
3 Social Science – University Core
3 Fine Art/Humanities – University Core
18 semester hours

Spring Semester 2
3 Fine Art/Humanities – University Core
3 Business Social Science
4 Natural Science – University Core
6 Select TWO of the following not completed in previous semester:
   WCOB 2013 Markets and Consumers
   WCOB 2023 Production and Delivery of Goods and Services
   WCOB 2033 Acquiring and Managing Human Resources
   WCOB 2043 Acquiring and Managing Financial Resources
16 semester hours

ALL pre-business requirements should be met by end of spring term

Fall Semester 3
3 MKTG 3433 Principles of Marketing
6 WCOB 3016 Business Strategy and Planning
6 Junior Senior Business Electives
15 semester hours

Spring Semester 3
3 MKTG 4133 Marketing Research
3 MKTG 4933 Retail Marketing Strategy
6 Junior Senior Business Electives
3 ENGL 2003 or ENGL 2013 or General Education Elective
   if Advanced Composition Requirement has already been met***
15 semester hours

Fall Semester 4
3 MKTG 4553 Consumer Behavior
3 MKTG 4943 Retail Buying and Merchandise Control
3 MKTG elective
7 General Education Electives
16 semester hours

Spring Semester 4
3 MKTG 4533 Marketing Management
3 MKTG elective
3 Junior Senior Business Elective
6 General Education Electives
15 semester hours

126 total hours

** Must be taken prior to fall semester of junior year
*** Must be taken prior to fall semester of senior year

Marketing Minor for Business Students:
The Department of Marketing and Logistics offers a minor for Walton College students desiring more knowledge of marketing to assist them in their careers. The minor requires the completion of 15 hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include the following courses:

- MKTG 3433 Principles of Marketing
- MKTG 4553 Consumer Behavior
- Plus nine hours from the following courses:
  - MKTG 3533 Promotional Strategy
  - MKTG 4033 Selling and Sales Management
  - MKTG 4133 Marketing Research
  - MKTG 4833 International Marketing
  - MKTG 4933 Retail Marketing Strategy
  - MKTG 4943 Retail Buying and Merchandising Control

Students who desire to earn a Marketing minor must notify the Walton College Undergraduate Programs Office of intent to pursue a minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

SEE PAGE 310 FOR MARKETING (MKTG) COURSES

Transportation and Logistics Major:
The major in transportation and logistics is designed to prepare students for careers in carrier management and logistics management. Carrier management is the management of the domestic and international modes of transportation. Logistic management applies analytical techniques and uses the systems approach in managing the flow of materials into and through the production and manufacturing processes of a firm to its customers.

Basic employment opportunities exist in marketing, sales, and operations positions with carriers in all transportation modes, and in positions with shippers having responsibility in one or more of the areas under logistics management, warehousing, packaging, and materials handling. Opportunities also exist in governmental agencies.

Complete the requirements for a B.S.B.A. degree as listed on page 202.

Total General Education 60
Walton College Core Requirements 33
(See page 203)

Course Requirements in the Major 24
- TLOG 3443 Principles of Transportation 3
- TLOG 3613 Business Logistics 3
- TLOG 3623 Purchasing and Inventory Systems 3
- TLOG 4633 Transportation Carrier Management 3
- TLOG 4643 International Transportation and Logistics 3
- TLOG 4653 Transportation and Logistics Strategy 3
- Plus two classes (six hours) from a single area: 6
  Information Systems
- ISYS 3253 Information Technology 3
- ISYS 2263 Intro to Information Systems Dev. 3
- Marketing:

HOURS

* Must be taken prior to fall semester of sophomore year
Transportation and Logistics

Eight-Semester Degree Program:

Students wishing to follow the eight-semester degree plan for Transportation and Logistics should see page 42 in the Academic Regulations chapter for university requirements of the program. Courses in BOLD must be taken in the designated semester. Courses in ITALIC may be taken in varied sequences as long as other designated requirements for these courses are met. Although other courses listed are not required to be completed in the designated sequence, the recommendations below are preferred.

### Fall Semester 1
3 **ENGL 1013 Composition I** - University Core
3 **MATH 2053 Finite Math** – University Core
3 **COMM 1313 Speech Communication**
1 WCOB 1111 Freshman Business Connections
2 WCOB 1012 Legal Environment of Business*
0 WCOB 1120 Computer Competency Requirement
3 U.S. History or Political Science – University Core
15 semester hours

### Spring Semester 1
3 **ENGL 1023 Composition II** – University Core
3 WCOB 1023 Business Foundations
3 WCOB 1033 Data Analysis
3 ECON 2023 Microeconomics – University Core
4 Natural Science – University Core
16 semester hours

### Fall Semester 2
3 MATH 2043 Survey of Calculus**
3 **ECON 2013 Macroeconomics** – University Core
6 Select TWO of the following:
- **WCOB 2013 Markets and Consumers**
- **WCOB 2023 Production and Delivery of Goods and Services**
- **WCOB 2033 Acquiring and Managing Human Resources**
- **WCOB 2043 Acquiring and Managing Financial Resources**
3 Social Science – University Core
3 Fine Art/Humanities – University Core
18 semester hours

### Spring Semester 2
3 Fine Art/Humanities – University Core
3 Business Social Science
4 Natural Science – University Core

6 Select TWO of the following not completed in previous semester:
- **WCOB 2013 Markets and Consumers**
- **WCOB 2023 Production and Delivery of Goods and Services**
- **WCOB 2033 Acquiring and Managing Human Resources**
- **WCOB 2043 Acquiring and Managing Financial Resources**
16 semester hours

ALL pre-business requirements should be met by end of spring term

### Fall Semester 3
3 **TLOG 3443 Principles of Transportation**
3 **TLOG 3613 Business Logistics**
3 Collateral from a single area
6 WCOB 3016 Business Strategy and Planning
15 semester hours

### Spring Semester 3
3 Collateral from a single area
9 Junior Senior Business Electives
3 **ENGL 2003 or ENGL 2013 or General Education Elective**
  Advanced Composition Requirement has already been met***
1 General Education Elective
16 hours

### Fall Semester 4
3 **TLOG 3623 Purchasing and Inventory Systems**
3 **TLOG 4633 Transportation Carrier Management**
6 General Education Electives
3 Junior Senior Business Elective
15 semester hours

### Spring Semester 4
3 **TLOG 4643 International Transportation and Logistics**
3 **TLOG 4653 Transportation and Logistics Strategy**
3 Junior Senior Business Elective
6 General Education Electives
15 semester hours

126 total hours

* Must be taken prior to fall semester of sophomore year
** Must be taken prior to fall semester of junior year
*** Must be taken prior to fall semester of senior year

### Transportation and Logistics Minor for Business Students:

The Department of Marketing and Logistics offers a minor for Walton College students desiring more knowledge of transportation and logistics to assist them in their careers. The minor requires the completion of 15 hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include the following courses:
- **TLOG 3443 Principles of Transportation**
- **TLOG 3613 Business Logistics**
- **TLOG 3623 Purchasing and Inventory Systems**
- **TLOG 4633 Transportation Carrier Management**
- **TLOG 4643 International Transportation Logistics**

Students who desire to earn a Transportation and Logistics minor must notify the Walton College Undergraduate Programs Office of intent to pursue a minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.
These courses are interdisciplinary courses that are not attached to a specific department in Walton College.

**Enterprise Resource Planning Minor:**

The Walton College offers an interdisciplinary minor in Enterprise Resource Planning (ERP). ERP systems are large-scale programs, which are used by many large companies to integrate their business processes and run the organization using primarily one software system. The minor requires completion of 15 hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include:

- WCOB 4213 ERP Fundamentals
- ISYS 4223 ERP Configuration and Implementation
  - Plus nine hours from the following courses:
    - ACCT 3013 Accounting View of Economic Events
    - ACCT 3533 Accounting Technology
    - ISYS 4233 ERP Development
    - TLOG 3443 Principles of Transportation
    - TLOG 3613 Business Logistics
    - TLOG 3623 Purchasing and Inventory Systems

Students who desire to earn an Enterprise Resource Planning minor must notify the Walton College Undergraduate Programs Office of intent to pursue a minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered for the minor.

**Financial Economics Minor:**

The Walton College offers an interdisciplinary minor in Financial Economics. The minor will provide students with the background needed for research in finance and industry. The minor requires completion of 15 hours of study with all of the courses applied toward the minor taken in residence. The 15 hours include:

- FINN 3043 Principles of Finance
- ECON 4753 Forecasting (Applied Time Series)
  - Plus nine hours from the following courses:
    - FINN 3063 Investments
    - FINN 3603 Corporate Finance
    - ECON 3033 Money and Banking
    - ECON 4743 Intro. to Econometrics

Students who desire to earn a Financial Economics minor must notify the Walton College Undergraduate Programs Office of intent to pursue a minor. All requirements for the minor must be completed prior to the awarding of the student’s undergraduate degree. All specific course prerequisites must be met. Each student must have a 2.00 cumulative grade-point average in the courses offered in the minor.

See Page 333 for Walton College of Business (WCOB) Courses
College of Education and Health Professions

MISSION AND OBJECTIVES

The mission of the College of Education and Health Professions is to enhance the quality of life of the citizens of Arkansas, the nation, and the world through the development of scholar-practitioners in education, health, and human services. The vision of the college is to become a nationally competitive, student-centered research college serving Arkansas and the world.

The goals of the College of Education and Health Professions are as follows:

- Strengthen the academic quality and reputation of the college by developing and enhancing programs of excellence in teaching, research, and service.
- Improve the quality and diversity of our students, faculty, and staff, and increase the size of our student enrollment.
- Generate increased private and public support for the college’s research, academic, and service initiatives.

FACILITIES AND RESOURCES

The Sylvia Hack Boyer Center for Student Services

To ensure that students receive the personal attention they need and deserve throughout their enrollment, the college established the Sylvia Hack Boyer Center for Student Services. Students who have completed 44 hours or less are assigned a professional academic adviser in the Center who will assist them by: providing accurate and personalized academic information, educating them about their academic responsibilities, and referring them to the internal and external resources and services of the University.

Questions pertaining to undergraduate programs, transfer of credit, student services, graduation requirements, and university administrative policies and procedures can be directed to the Sylvia Hack Boyer Center for Student Services, 479-575-4203, 336 Graduate Education Building. The Center is part of the Office of the Associate Dean for Academic Affairs. It can be reached via e-mail at bcss@uark.edu.

Organization

For administrative purposes, the programs of the college are organized under six academic units:

1. Curriculum and Instruction
   - Childhood Education
   - Middle Level Education
   - Secondary Education
   - Special Education

2. Educational Leadership, Counseling, and Foundations
   - Counselor Education

Office of the Dean of the College
324 Graduate Education Building
479-575-3208

Dean of the College
M. Reed Greenwood

Associate Dean for Administration
John W. Murry Jr.

Assistant Dean for Academic Affairs
Stephen J. Langsner

Director of Advising
Gloria A. Flores

Sylvia Hack Boyer Center for Student Services
339 Graduate Education Building
479-575-4203

Teacher Education/Licensure
117 Peabody Hall
479-575-6740

Honors Program
316 Graduate Education Building
479-575-4280

Speech and Hearing Clinic
410 Arkansas Avenue
479-575-4509

World Wide Web: http://coehp.uark.edu/
E-mail: bcss@uark.edu
The College of Education and Health Professions

Educational Foundations
Educational Administration
Educational Technology
Higher Education
3. Education Reform
4. Eleanor Mann School of Nursing
   Nursing
5. Health Science, Kinesiology, Recreation, and Dance
   Health Science
   Kinesiology
   Recreation
6. Rehabilitation, Human Resources, and Communication Disorders
   Adult Education
   Communication Disorders
   Rehabilitation Counseling
   Vocational Education

Facilities

The Graduate Education Building and Peabody Hall serve as the nucleus of the College of Education and Health Profession’s activities. An auditorium, several conference and seminar rooms, classrooms, and offices for individual professors, along with several special administrative and service units such as dean, associate dean for administration, and associate deans for academic affairs, the Sylvia Hack Boyer Center for Student Services, distance education center and educational statistics laboratory are housed in the Graduate Education Building.

Peabody Hall houses the Department of Curriculum and Instruction, Teacher Licensure, and several classrooms and offices for individual professors. The Health Physical Education and Recreation (HPER) Building houses the majority of faculty offices and classrooms for health science, kinesiology, recreation, the Office for Studies on Aging, and the Health Education Projects Office. Specialized indoor space for instruction and recreation includes two dance studios, the Donna Axum Fitness Center, four gymnasia, an Olympic-size swimming pool, a jogging track, a climbing wall, and a combative room. The building also features a Human Performance Laboratory for instruction and research. The Department of Health Science, Kinesiology, Recreation, and Dance uses the Donna Axum Fitness Center, HPER Building Natatorium, UA tennis courts, and Barnhill Arena for instructional purposes. Intramural/Recreational Sports offices are located on the second level of the HPER Building. The intramural/recreational sports program is a University-wide program housed in the college. Administered through the Department of Health Science, Kinesiology, Recreation, and Dance, the program provides recreational activities to the entire University community. The program is organized into seven program areas: intramural sports, fitness/wellness, facility management, special events, sport clubs, accessible recreation, and the Outdoor Connections Center.

The Communication Disorders program is housed in the Speech and Hearing Clinic. The clinic contains faculty offices, a classroom, a graduate seminar room, teaching and research laboratories, and space and facilities for the provision of services to the speech, language, and hearing impaired. University services are provided through the clinic to University students and the community.

The Eleanor Mann School of Nursing is housed in Ozark Hall. The nursing program facilities include administrative offices, faculty offices, two classrooms, two laboratories, a conference room, and a computer lab. The school has affiliation agreements for clinical practice with area health care agencies.

West Avenue Annex houses the following education research and service units: Office for Research, Measurement and Evaluation (ORME), Office for Educational Policy (OEP), Arkansas Leadership Academy (ALA), Teacher Advancement Program of Arkansas (TAPS), Great Expectations of Arkansas (GEA), Arts in Education (A+) programs, and the child-care projects office. Established in 1991, the Arkansas Leadership Academy is a nationally recognized statewide partnership of 13 universities, 9 professional associations, 15 educational cooperatives, the Arkansas Departments of Education, Higher Education, and Workforce Education, the Arkansas Educational Television Network, Tyson Foods Inc., Wal-Mart Stores Inc., and the Walton Family Foundation. The Office of Research, Measurement, and Evaluation conducts targeted educational research focusing on issues affecting students in Arkansas and general theoretical work in statistics, testing, and educational measurement. The Office of Education Policy was established in 2003 within the Department of Educational Leadership, Counseling, and Foundations to gather and disseminate evidence to aid lawmakers and policy makers in decision-making regarding education in the state. Established in 1974, the Center for the Utilization of Rehabilitation Resources for Education, Networking, Training and Service (CURRENTS) provides human resources development programming for personnel employed in rehabilitation programs funded by the Rehabilitation Act. These programs include the following: state vocational rehabilitation agencies, independent living centers, community rehabilitation programs, client assisted programs, and projects with industries in the states of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. The center is located at the Hot Springs Rehabilitation Center, Hot Springs, Arkansas.

Established in 1981, the Research and Training Center for People who are Deaf or Hard of Hearing conducts research and training programs to enhance rehabilitation efforts on behalf of the 24 million U.S. citizens who are deaf or hard of hearing. These programmatic efforts are directed toward enhancing the career preparation, job entry and placement, career advancement, and workplace communication accommodations consistent with the Americans with Disabilities Act. The center is located in Little Rock.

Academic Journals

The College of Education and Health Professions is host to several highly regarded academic and professional journals. One such publication is the Journal of American Deafness and Rehabilitation Association, whose monographs are edited by RHAB Professor Douglas Watson. The journal is now in its 35th year of publication and is considered the nation’s leading reference for issues involving rehabilitation of persons who are deaf or hard of hearing. The Journal of Interpretation also is edited by RHAB Professor Douglas Watson. Published by the Registry of Interpreters for the Deaf, this journal is considered the most widely read sign-language interpreting journal in the world.

In addition, the college is host to the Journal of Research & Policy Studies, edited by EDFD Professor Christopher J. Lucas.

DEGREES OFFERED

The college offers curricula leading to the Bachelor of Science in Education degree (B.S.E.) with several programs listed below. Several of these degree programs have concentrations and specialties that are described in the section entitled “Departmental Majors.” The college also offers the curriculum leading to the Bachelor of Science in Nursing. The degree programs are described in this college section under the area of “Departmental Majors.”

MAJORS, CONCENTRATIONS, AND MINORS

Majors and Concentrations
Childhood Education
Communication Disorders
Minors
Students in the college may declare any official academic minor available at the University of Arkansas. Students must notify the Sylvia Hack Boyer Center for Student Services of their intent to pursue a minor. The college, with the assistance of the college offering the minor, will certify that the requirements of the minor have been satisfied. The academic minor will be designated on the student’s official transcript. Requirements for the minor are listed in the catalog under the department offering the minor. The College of Education and Health Professions only offers one minor in Recreation (Department of Health Sciences, Kinesiology, Recreation and Dance). See page 248 for course requirements.

OTHER PROGRAMS

Curricula Offered For Initial Licensure
Nursing Licensure: Completing the minimum requirements for the degree of Bachelor of Science in Nursing will satisfy the academic requirements for licensure as a Registered Professional Nurse. Students must complete all of the requirements set forth by the Arkansas State Board of Nursing to be licensed as a registered nurse. See adviser for details.

Teacher Licensure and Licensure of other School Personnel: The approved program of study for initial teacher licensure at the University of Arkansas, except for music and art education, and some areas of agriculture education is the Master of Arts in Teaching (M.A.T.) degree program. The M.A.T. degree program is offered in consecutive summer, fall, and spring semesters with initial enrollment in the summer semester. The M.A.T. is a graduate degree program and requires a minimum of 33 semester hours. The M.A.T. degree program has six areas of emphasis: agriculture education, childhood education, middle level education, physical education, secondary education, and vocational education. Consult the Admission Process for Initial Teacher Licensure Stages I-IV on page 230 and the Graduate School Catalog for admission and graduation requirements for the M.A.T. degree program.

The State Board of Education issues the regulations governing the licensure of teachers in Arkansas. The Board specifies minimum cut-off scores for all Praxis exams. The U of A pass rate for 2002-2003 was 100 percent, and 107 students completed the program. Each application for a teacher’s license requires completion of an approved program of study, completion of a state and national background check, and documentation of passing the Praxis exams. Those wishing to add an additional license or endorsement, should contact the Coordinator of Teacher Education in 117 Peabody Hall for the approved programs of study or go to www.uark.edu/depts/coehp/Certification.htm. Look for the menu “Additional Licensure Plan Program of Study.”

The Bumpers College of Agricultural, Food and Life Sciences, College of Education and Health Professions, Fulbright College of Arts and Sciences, and the University Teacher Education Board for Initial Certification have developed the preparation programs leading to initial teacher licensure. The Coordinator of Teacher Education will recommend students for initial teacher license who have submitted the licensing packet and successfully completed the appropriate approved program and all state licensure requirements. Licensure packets may be obtained from the Coordinator of Teacher Education, 117 Peabody Hall, 479-575-6740, or from the Arkansas Department of Education 501-682-4342. Students must follow the licensure guidelines as set forth by the Arkansas Department of Education in consultation with the Coordinator of Teacher Education. Adding an additional licensing area or endorsement may also require passing Praxis II scores and an approved program of study. See College Academic Regulations for the admission process for initial teacher licensure.

University Teacher Education Board for Initial Certification
The University Teacher Education Board for Initial Certification is composed of the associate deans; faculty representatives from the College of Education and Health Professions; Fulbright College of Arts and Sciences; the College of Agricultural, Food and Life Sciences; public school teachers and/or administrators, and students. The functions are to (1) govern the teacher education/licensure program that culminates in the Master of Arts in Teaching (M.A.T.) degree; (2) establish general policies and procedures necessary to maintain quality in the M.A.T. degree program; (3) oversee the general coordination of the initial licensure process; and (4) approve new courses and course changes in the M.A.T. program. The Board serves as a liaison group for the faculties involved and emphasizes the importance of teacher education as one of the primary responsibilities of the University.

COLLEGE ADMISSION REQUIREMENTS

All entering students (including freshmen, international, and transfer) admitted to the University of Arkansas, Fayetteville, are eligible for admission to the college. Students transferring from another college within the University must have a cumulative GPA of at least 2.00.

Transfer of Credit
The policies controlling the granting of credit for course work taken at other institutions apply as follows:

1. Neither hours nor grades earned in transfer work are used in the determination of the student’s grade-point average.

2. General transfer credit is awarded for courses in which a grade of “C” or higher has been earned. Course work must be applicable to a baccalaureate degree; credit is not granted for course work that is remedial or technical in nature. Students can petition to have up to six hours of “D” grades transferred for degree credit to the University of Arkansas. Students must have a 2.00 GPA on a 4.00 scale to be considered, and courses must meet core or elective requirements in the student’s degree program. Courses outside the degree program and courses in the major cannot be considered for transfer. The Third Level Administrative Review Committee makes all decisions regarding “D” transfers. Petitions can be obtained from the Office of
Admissions, or you can print and mail a “D” Petition Form. The form is available online at http://admissions.uark.edu/students/transfer/dpetition.pdf.

3. If a course with a grade of “D” is successfully petitioned through the Office of Admissions for “General Credit,” the College of Education and Health Professions requires a second petition called “A Petition to Accept ‘D’ Grades for Transfer Credit” to be successfully navigated. The petition can be obtained from the Sylvia Hack Boyer Center for Student Services, 336 Graduate Education Building. Each course will be reviewed by the COEHP Undergraduate Curriculum Committee. Students are encouraged to make an appointment with an academic adviser in the Sylvia Hack Boyer Center for Student Services to discuss options and to clarify this procedure.

4. Education courses completed at the lower-division (freshman or sophomore) level at another institution will not count as equivalents of upper-division (junior or senior) level courses offered in the college.

5. Courses taken at other institutions of higher education where the course content is designed to be remedial are not accepted.

6. The student should be prepared to submit official course descriptions of transfer course work if there is any question as to whether the college will grant degree credit for such work.

Undeclared Majors

Students enrolled in the College of Education and Health Professions must declare a major. For assistance contact the Sylvia Hack Boyer Center for Student Services, 336 Graduate Education Building, 479-575-4203.

COLLEGE SCHOLARSHIPS

The College of Education and Health Professions offers limited numbers of scholarships in varying amounts.Recipient selection is based on a variety of attributes that are specific to each award. Attributes may include but are not limited to: the basis of promise, character, leadership skills, scholarship, or financial need.

Scholarship applications are available in December of each year via the College Web site at http://coehp.uark.edu/#. All current and future COEHP students are strongly encouraged to take advantage of these scholarship opportunities. For further information regarding scholarships and the application process, visit the Scholarships link on the College of Education and Health Professions’ Web site or contact the Office of the Associate Dean for Administration, 301 Graduate Education Building, 479-575-5116.

STUDENT ORGANIZATIONS

There are many general-interest societies and organizations on the campus, and nearly every department of the University maintains an honor society through which high scholarship is rewarded. Of special interest to students in the college are the following:

• Kappa Delta Pi – honor society for education
• Phi Delta Kappa – honor fraternity for graduate students
• Delta Pi Epsilon – graduate business education majors
• Kinesiology Club – for kinesiology majors
• Recreation Majors Club – for recreation students
• Razorback Athletic Training Association (RATA) – for undergraduate kinesiology majors with a concentration in exercise science – pre-athletic training, entry level graduate athletic training students and graduate assistant athletic trainers in women’s and men’s athletics
• National Student Speech-Language-Hearing Association – for communication disorders majors
• Arkansas Nursing Students Association, National Student Nurse Association, and the Pi Theta chapter of Sigma Theta Tau International Honor Society of Nursing – for nursing majors
• Rehabilitation Counseling Association for Students – rehabilitation counseling program majors.

COLLEGE ACADEMIC REGULATIONS

Admission Process for Initial Teacher Licensure

Stage I: Enrollment
Enroll in an undergraduate degree program leading to a potential teacher licensure field. Potential fields include the following:

• Agricultural Education – B.S.A.
• Art Education – B.F.A.
• Childhood Education – B.S.E.
• Human Environmental Sciences Education – B.S.H.E.S.
• Kinesiology K-12 – B.S.E.
• Middle Level Education – B.S.E.
• Music Education – B.M.
• Secondary Education – B.A., B.S.
• Vocational Education – B.S.E.

Stage II: Evaluation

Complete an Evaluation for Internship by October 1 prior to entering the Master of Arts in Teaching (M.A.T.). Art and music students should complete the evaluation by October 1 prior to fall internship and by March 1 prior to a spring internship. Satisfactory completion of this form does not guarantee admission to the Master of Arts in Teaching (M.A.T.) degree program or other teacher education programs. All requirements must be met to be cleared for the internship. This form is available from the college Web site at www.uark.edu/depts/coehp/certification.htm. The form must be completed and returned to the Coordinator of Teacher Education, 117 Peabody Hall.

Students must meet the following criteria to be cleared for internship:
1. Pass Praxis I test by meeting or exceeding the Arkansas Department of Education cut-off scores. This test should be taken after the student has completed 30 credit hours and upon completion of ENGL 1013, ENGL 1023, and MATH 1203. Please note that several departments have additional program requirements regarding the Praxis I and II. Please consult with your adviser for additional requirements.

2. Obtain a “C” or better in the following pre-education core if these courses are required for your program:
   - CID 1002, CID 1011, CID 3023 (PLHD 3903 for KINS K-12 majors), CID 3033, ETEC 2001, ETEC 2002L.
   - In Addition, For Middle-Level Education and Elementary Education a minimum of “C” or higher must be earned in ENGL 1013, ENGL 1023, ENGL 2003, COMM 1313, and MATH 1203 unless UA exemption is earned in one or more of the courses.

3. Complete additional licensure requirements: COEHP majors take either HLS 1002 or 1103, and PASE 1621. PHED majors take either HLS 1002 or 1103, and PHED 3042. CID and MLED majors take HIST 3383. SEED Social Studies students take either HIST 4583 or HIST 3383 and any ECON course.

4. Secondary Education majors except for art and music majors, must complete the following courses with a grade of “C” or higher. CIED 3023 or 4023, CIED 4131, ETEC 2001/2002L or demonstration of computer competencies in a portfolio.

5. Obtain a “C” or better in the six hours of program-specific courses (see your adviser for information).

6. Schedule a visit with your adviser for additional requirements including admission to upper-division courses.

7. Consult with your adviser regarding Praxis II requirements.
8. Earn a cumulative GPA of 2.70 or higher in the undergraduate degree program (special conditional admission will be considered on a case-by-case basis for students with a GPA between 2.5 and 2.69). Some programs require a higher GPA. Consult your adviser for the GPA requirements for your program.

**Stage III: Admission**

The following minimum criteria are necessary to be eligible for consideration for admission to the M.A.T. Degree Program: (Consult with your faculty adviser for additional requirements set by your program.)

1. Meet all requirements in stages I and II.
2. Complete an appropriate undergraduate degree program.
3. Earn a cumulative GPA of 2.70 or higher in all previous courses completed as part of a bachelor's degree program. Some programs require a higher GPA. Consult your adviser for the GPA requirements for your program.
4. Obtain recommendation for admission from M.A.T. program area based on successful completion of portfolios, evaluation for internship, GPA requirements, course work requirements, selected written recommendations, an interview, and other requirements specified by your program.
5. Obtain admission to Graduate School. (See UA Graduate School Catalog for details.)

Enrollment in each cohort will be limited. Transfer students will be allowed to enter the program on a space available basis and must progress through all three admission stages.

**Stage IV: Graduation requirements for M.A.T.**

1. Meet all requirements in stages I – III.
2. Obtain a minimum cumulative GPA of 3.00.
3. Complete a minimum of 33 graduate semester hours as specified by program area.
4. Satisfactorily complete an internship. The internship will be completed at a school/district in Benton or Washington County that has been approved by the Northwest Arkansas Partnership Steering Committee.
5. Pass the appropriate Praxis tests (see adviser for the appropriate test) by meeting or exceeding the Arkansas Department of Education cut-off scores. This test is required for most programs. Please consult with your adviser.
6. Successfully complete Comprehensive Examination.
7. Consult with your adviser for other requirements.
8. Apply for degree at the Graduate School, 119 Ozark Hall.

**Licensure**

Students who have completed the stages listed above must obtain a licensure packet from the Coordinator of Teacher Education, 117 Peabody Hall, prior to entering internship.

NOTE: Students should always consult the Coordinator of Teacher Education or adviser regarding licensure requirement changes. Students will not be licensed to teach in Arkansas until they have met all requirements for licensure as set forth by the Arkansas Department of Education.

NOTE: Students who have completed the B.M. or B.F.A. in music or art education and the B.S.A. in agricultural education and have completed the internship may obtain the licensure packet from the Coordinator of Teacher Education, 117 Peabody Hall.

Usually licensure in another state is facilitated by qualifying for a license in Arkansas. Application in another state must be made on the application form of that state, which can be obtained by request from the State Teacher Licensure office in the capital city. An official transcript should accompany the application. In many instances the applications are referred to the Coordinator of Teacher Education to verify program completion in teacher education.

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**College Honor Roll**

At the close of each semester, the college recognizes students who qualify for the honor roll. They are the 10 percent of the highest-ranking students in each class. Students must carry a minimum of 12 semester hours to be eligible for the Honor Roll and obtain a minimum term GPA of 3.5.

**Graduation with Honors**

Graduation with Honors will be conferred to College of Education and Health Professions students (who are not participating in the college “Honor Program”) based upon their University of Arkansas cumulative grade-point average at the time of graduation. To earn this distinction, a student must have completed at least one-half of the course work required for his or her degree at the University of Arkansas, Fayetteville. The graduation with honors designation will be assigned as follows:

1. For highest distinction, the student must have a minimum cumulative grade point average of 3.95 and rank in the top 10 percent of the graduating class.
2. For high distinction, the student must have a minimum cumulative grade point average of 3.75 and rank in the top 10 percent of the graduating class.

**HONORS PROGRAM**

The College of Education and Health Professions Honors Program is designed for students who value and want to be challenged by an exceptional educational experience and want to focus their studies intensively. The program creates and supports an academic environment of intellectual adventure and provides a carefully integrated and demanding curriculum. And the rewards are immense: high academic achievement; an honors degree on the student’s transcript; and recognition at commencement.

The mission of the Honors Program is to: Establish and maintain an Honors community of learning that is intellectually rigorous, personally and culturally enriching, and fosters learning and discovery through independent and collaborative inquiry; Allow students to be creative, inquisitive and think outside the box; Support student research and analysis of ideas; Support student academic ventures through mentoring, travel, and supplies when presenting work at undergraduate research symposia; Challenge students to connect the classroom with the larger world by expanding social and cultural experiences and promoting leadership, and prepare students for admission to and success within graduate and professional schools in the United States and abroad.

Benefits of participating in the Honors Program include: Small class sizes, close contact with talented faculty, opportunity for independent study that counts toward the requirements of the Honors Program, special academic counseling and priority registration, increased confidence and skill in writing, Honors housing, recognition on transcript as “Graduate of the University Honors Program;” enhanced career opportunities, and increased advantages for graduate or professional school applicants.

Admission to the COEHP Honors Program assures automatic admission to the University of Arkansas Honors College. The following are admission criteria for students seeking admission to the COEHP Honors Program:

**Entering Freshmen**

- 28 ACT or equivalent SAT score (not super scored)
- 3.5 or greater high school GPA

**Students Applying Following Their First Academic Year**

Successful completion of one academic year at the University with a cumulative 3.5 or greater GPA
College of Education and Health Professions

Departmental recommendation regarding the student’s academic abilities

Inter-College Transfer of Honors Students
Students at the University who were honors students in other college honors program on campus may transfer into the COEHP under the following criteria:

- 0-29 hours - 3.25 cumulative GPA
- 30-59 hours - 3.37 cumulative GPA
- 60-89 hours - 3.50 cumulative GPA

Transfer Students
3.5 Cumulative GPA in ALL transfer work
Letter of recommendation from a previous professor regarding the student’s academic abilities

Application:
1. Complete the Honors Program Application and return to: COEHP Honors Program, Attention Assistant Dean for Academic Affairs, Graduate Education Building, Room 317 Fayetteville, AR 72701
2. All applications will be reviewed and approved by the Honors Program Council. A letter of acceptance will be sent to the student within 10 working days of receipt of the application.
3. Following admission to the COEHP Honors Program, a faculty mentor adviser will be assigned from the student’s academic department in addition to an academic adviser in the Sylvia Hack Boyer Center for Student Services.

Eligibility for continued enrollment in the COEHP Honors Program will be based on the following cumulative minimum grade-point averages:

- 3.25 GPA - At the end of the freshman year (30 hours)
- 3.37 GPA - At the end of the sophomore year (59 hours)
- 3.5 GPA - At the end of the junior year (93 hours)
- 3.5 GPA - At graduation

At the end of each semester, the director of the COEHP honors program will review the academic records of all enrolled honors students to determine whether each one has the cumulative grade-point average to continue in the program. If a student becomes ineligible, he/she will be requested to drop all honors courses for which he/she is registered for the following semester. The ineligible student will be flagged as “probationary status.” GPA will be reassessed following completion of the semester. An honors student may stay on probationary status for only one semester without being dropped from the honors program. The student will be reinstated to good standing in the honors program or dropped permanently from the program.

The course requirements for completion of the College of Education and Health Professions honors program are as follows:

1. The student meets all University, COEHP, and department degree requirements.
2. Completion of 12 hours of honors credit, only six of which may be taken outside the COEHP.
3. The following courses are required: 6 hours Honors sections of core classes taken from Arts and Sciences, 6 hours Honors sections of classes taken within the COEHP including HNED 3001 H Honors Education Thesis Tutorial, HNED 4003 H Honors Education Thesis/Project, a minimum of 2 hours of honors courses from the students academic department.
4. Written submission of the honors thesis/project to the COEHP Honors Council and oral presentation of the Honors Thesis to faculty and students in the COEHP (arranged by the Honors Council).
5. Graduation with a minimum GPA of 3.5. Summa Cum Laude will be awarded Honors Students graduating with a GPA > 3.9. Magna Cum Laude will be awarded Honors Students graduating with a GPA > 3.7. Cum Laude will be awarded Honors Students graduating with a GPA > 3.5

A requirement for graduating from the College of Education and Health Professions Honors Program is completion of the thesis or creative project. Students must complete both the Honors Thesis Tutorial (HNED 3001H) and Honors Thesis/Project (HNED 4003) courses. The Honors Thesis Tutorial (HNED 3001H) is designed to provide the foundation for the Honors Thesis. Students and faculty tutors work one on one exploring a specific topic, which has been agreed upon by the student and the professor. This course may be repeated for 5 hours.

The Honors Thesis/Project (HNED 4003) is designed to provide the honors student with the opportunity to complete original research or creative activity in their major field. Approval of the student’s thesis/project and oral presentation are requirement for successful completion of this course.

The thesis/project process allows students to advance their research skills significantly or perfect their crafts in their respective fields. The Honors thesis/project may well be the students’ most valuable educational experience requiring students to examine complex objects, ideas and issues. Students are expected to submit work that meets the scholarly expectations of the discipline and the COEHP Honors Program.

The thesis/project experience develops self-reliant scholars and will serve Honors Students well as they leave the University to take their place as community, professional, or academic leaders. The thesis or project is a stepping stone to graduate or professional school.

The Honors student is to complete the Honors Thesis/Project Tutorial (HNED 3001H) course and submit their Honors Thesis/Project Proposal the semester prior to enrolling in the Honors Thesis/Project (HNED 4003H) course. The proposal form stands as a “contract” between you and your faculty mentor and committee. It is an agreement with the COEHP Honors Council to complete the work described within the semester in which the student enrolls in the thesis/project course.

The abstract required on the Honors Thesis/Project Proposal Form should give sufficient information about the nature and scope of the proposed work and should be written for a well-educated but general audience. [Note: Your faculty mentor may require a full prospectus in the more specialized language of your discipline prior to accepting the abstract.] If there are substantive changes to the Honors Project, a revised abstract should be submitted on a new proposal form to the Honors Council.

The student must be enrolled in the Thesis/Project course during the semester the thesis will be completed. It is assumed, however, that the student will be working on the thesis idea, the proposal and completion of the project throughout the junior and senior years.

The final thesis should be prepared and formatted according to the conventions employed in the discipline of study. Students participating in a team project must submit a copy of the team’s project as well as provide the COEHP Honors Council a two-to-four page summary documenting their individual contribution to the team effort.

The final thesis and the Honors Thesis/Project Approval Form should be submitted to the faculty mentor and committee two weeks prior to the last class day. Presentation of the Thesis/Project to the COEHP faculty and Honors Council will occur the week preceding finals week. Once the faculty mentor has signed the approval form, the thesis and form should be received by the Honors Council no later than the last class day. For more information about the honors program or to complete an application form, please refer to the college’s honors Web page at http://hono.uark.edu/index.htm.

SEE PAGE 292 FOR COLLEGE OF EDUCATION AND HEALTH PROFESSIONS HONORS PROGRAM (HNED) COURSES
DEGREE REQUIREMENTS

Minimum Requirements for the B.S.E. or B.S.N. Degree

The candidates for a baccalaureate degree from the college must meet University requirements, which specify at least 124 semester hours of work with a grade-point average of at least 2.00 on all work attempted in the University. Students exempting any course must still meet the 124-hour graduation requirement and should consult their adviser for specific program requirements. Exemption of courses does not result in credit earned. The students must comply with the prescriptions and restrictions listed below and under General Studies and must complete the requirements in one or more of the approved degree programs.

Students must also meet all other University Requirements for Graduation, including the University Core requirements (page 40). Students are required to have a pre-graduation check at least one semester prior to the graduation term. Students who complete the pre-graduation check and meet all University and College of Education and Health Professions requirements may apply for graduation under the guidelines detailed on page 42. All course work, University requirements, and college requirements must be completed by the deadline for the term in which applied. Students not graduating in spring, but wishing to participate in the spring commencement ceremony, must apply for graduation by the established priority deadline for the spring term and have no more than 12 hours of course work remaining for the baccalaureate degree. For clarification, please contact the Sylvia Hack Boyer Center for Student Services, 336 Graduate Education Building, at 479-575-4203.

GRADUATE STUDIES

The Graduate School, in cooperation with the college offers advanced work in education and health professions leading to the degrees of Master of Arts in Teaching, Master of Science, Master of Education, Educational Specialist, Doctor of Education, and Doctor of Philosophy.

The Graduate School awards the graduate degrees. Students who are interested in registering for graduate courses or in becoming candidates for these degrees should consult the dean of the Graduate School and the Graduate School Catalog.

Students who plan to study for an advanced degree in the subject-matter field should consult with the head of the department concerning course requirements to be eligible to begin graduate study. Specialization requirements for a B.S.E. degree in the College of Education and Health Professions may not be sufficient in every field to gain admission for graduate study without deficiencies.

ACCREDITATIONS

Students who complete the approved program of study leading to initial licensure are eligible to receive licenses to teach at the grade level or in the fields for which they have made preparation upon application and presentation of acceptable scores on the appropriate Praxis exams. However, students must follow licensure guidelines set forth by the Arkansas Department of Education to be licensed to teach.

The teacher education program of the College of Education and Health Professions is accredited by the National Council for Accreditation of Teacher Education (NCATE), 2010 Massachusetts Ave., NW, Suite 500, Washington, D.C. 20036; phone 202-466-7496; Web: www.ncate.org. This accreditation covers the initial teacher preparation programs and/or advanced educator preparation programs. Because of the accreditation by the National Council for Accreditation of Teacher Education, students who complete the curricula as outlined in this catalog are eligible to be recommended for licensure in states that agree to certify graduates who are recommended by the College of Education and Health Professions as having fulfilled its requirements.

The teacher education program submits data to Educational Testing Service for its Title II Report. According to data from this report, there were 116 individuals who completed the teacher education program at the University of Arkansas in 2003-2004. Of these, 100 percent passed the Praxis I and II tests by the cut-off date.

The University of Arkansas holds membership in and is accredited by the North Central Association of Colleges and Secondary Schools. The college is also a member of the American Association of Colleges for Teacher Education. The graduate program in communication disorders is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association. The counselor education graduate program is nationally accredited through the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The Bachelor of Science in Nursing (B.S.N.) degree program is accredited by the Commission on Collegiate Nursing Education and by the National League for Nursing Accrediting Commission. It is also approved by the Arkansas State Board of Nursing. The M.S. degree program in Rehabilitation Counseling is accredited by the Council on Rehabilitation Education (CORE). Graduates of the accredited program are eligible to sit for the Certified Rehabilitation Counselor (CRC) examination. The Bachelor of Science in Education (B.S.E.) degree program in Recreation is accredited by the National Recreation Park Association/American Association for Leisure and Recreation Council in Accreditation.

Departmental Majors

CURRICULUM AND INSTRUCTION (CIED)

Tom E. C. Smith
Department Head
214 Peabody Hall
479-575-4209
E-mail: tecsmith@uark.edu

The Department of Curriculum and Instruction sponsors initial teacher licensure programs in the areas of childhood education, middle level education, and secondary education. The department also offers additional licensure plans in ESL, gifted and talented, special education and selected other areas (please see College Web Site licensure link). Additional secondary school licensure programs are made available with the cooperation of the Department of Health Science, Kinesiology, Recreation, and Dance; the Department of Rehabilitation, Human Resources and Communication Disorders; the J. William Fulbright College of Arts and Sciences; and the Dale Bumpers College of Agricultural, Food and Life Sciences.

SEE PAGE 260 FOR CURRICULUM AND INSTRUCTION (CIED) COURSES

Childhood Education

- Associate Professors Collier, Imbeau, Gallavan,
- Assistant Professors Eilers, Kirkpatrick, Penner-Williams
- Instructors Cronan, Riggs,

The University of Arkansas offers the B.S.E. degree in childhood education and the M.A.T. degree in childhood education. To be recommended for an initial teaching license in childhood education (pre-kindergarten through grade four) the student must complete both degree programs. Information about the M.A.T. degree program in childhood education can be found in the Graduate School Catalog.
Academic Regulations for Childhood Education Majors and Others Seeking Admission to the Undergraduate Teacher Education Program

Stage I: Sylvia Hack Boyer Center for Student Services Advisement
1. Enroll in the undergraduate B.S.E. program in childhood education.
2. Complete 45 hours.
3. Obtain a grade of “C” or better in CIED 1002 and CIED 1011 (Introduction to Education/Practicum) and in MATH 1203 or higher.
4. Establish a GPA of 2.50 or better at the University of Arkansas or on transfer hours.
5. Pass Praxis I (required for enrollment in upper-division professional education courses).

Stage II: Program Advisement
1. Register for and complete screening (attending required information session and participating in an oral interview with program faculty and providing a copy of the appropriate Praxis passing scores) in the first semester advised by childhood education program faculty.
2. Eligibility to enroll in subsequent program courses is contingent upon successful screening as well as meeting ALL Stage I requirements.
3. Establish a GPA of 2.7 or better.

Stage III: Admission to Undergraduate Teacher Education Program
Eligibility to enroll in upper-division classes (CIED 3103, CIED 3113, CIED 4128, CIED 4113, and CIED 4101) is based on successfully meeting all Stage II requirements and maintenance of 2.70 or better GPA.

NOTE: All professional education courses in CIED must have a grade of “C” or better. Passing appropriate Praxis scores and a GPA of 2.7 or better are required for enrollment in upper-division (senior year) professional education courses. CIED 3103 and CIED 3113 are only offered during the fall semester. CIED 4128, CIED 4113, and CIED 4101 are only offered during the spring semester. No teaching methods courses may be taken by correspondence.

Childhood Education Requirements

<table>
<thead>
<tr>
<th>University Core</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLIT (3 hrs) World Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL (3 hrs) Literature elective</td>
<td>3</td>
</tr>
<tr>
<td>HLSC 1002 Wellness Concepts</td>
<td>3</td>
</tr>
<tr>
<td>PEAC 1621 Fitness Concepts</td>
<td>2</td>
</tr>
<tr>
<td>ARTS 1003 Art Studio</td>
<td>1</td>
</tr>
<tr>
<td>PSYC 2003 General Psychology</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTE: All professional education courses in CIED must have a grade of “C” or better. Enrollment in upper-division professional education courses may be limited. Contact advisers for specific details. No teaching methods courses may be taken by correspondence.

Childhood Education Eight-Semester Degree Program
Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Math electives recommended for Childhood Education majors are MATH 1213, MATH 2053, MATH 2103, MATH 3773, MATH 4783, or STAT 2303.

Fall Semester 1
1. ENGL 1013 Composition I
2. MATH 1203 College Algebra (or higher)
3. BIOL 1543/1541L Principles of Biology w/Lab
4. HLSC 1002 Wellness Concepts
5. PEAC 1621 Fitness Concepts
Spring Semester 1
3 †ENGL 1023 Composition II
3 MATH Elective
4 GEOL 1113/1111L
2 †CIED 1002 Introduction to Education
1 †CIED 1011 Practicum
3 PSYC 2003 General Psychology
16 semester hours

Fall Semester 2
3 ARHS 1003 Art Lecture
4 Physical Science w/Lab Elective
3 †CIED 3023 Survey of Exceptionality
3 PSYC 3093 Childhood & Adolescence
3 †COMM 1313 Fundamentals of Communications
16 semester hours

Spring Semester 2
4 Science w/Lab
3 ETEC 2001/2002 Educational Technology w/Lab
3 HESC 2433 Child Development
3 MATH 2213 Math Structures I
3 †CIED 3033 Classroom Learning Theory
16 semester hours

Fall Semester 3
3 HIST 3383 Arkansas & the Southwest
3 ARTS 1003 Art Studio
3 ECON 3053 Economics for Elem. Teachers
3 WLLT 1113 World Literature
3 HESC 3402/3401L Child Guidance w/Lab
3 MATH 2223 Math Structure II
18 semester hours

Spring Semester 3
3 MUED 3813/MUED 3810L Music ELED majors
3 †CIED 3263 Language Development/Educator
3 GEOG 1123 Human Geography
3 PHED 3373 Meth/Mat in PE for Elem School
3 ARED 3603 Public School Art
3 †ENGL 2003 Advanced Composition (or exemption)
15-18 semester hours

Fall Semester 4
3 †CIED 3103 Children’s Literature
3 †CIED 3113 Emergent & Developmental Literacy
3 HIST 2003 or 2013 U.S. History
3 HESC 4453 Parenting & Family Dynamics
3 MATH Elective
15 semester hours

Spring Semester 4
3 †CIED 4113 Integrated Comm. Skills
3 †CIED 4126 Content Integration
1 †CIED 4101 Practicum
5 ENGL or WLIT literature elective
15 semester hours

127-130 Total Hours

†A grade of “C” or better is required for these courses

* 2.7 GPA cumulative and pass PRAXIS I required for these courses
In accordance with middle-level licensure in Arkansas, pre-service teachers must choose a dual area of concentration with requisite number of hours for both the primary and supporting areas of concentration. Primary/supporting areas are English/social studies (51 hours), social studies/English (52 hours), mathematics/science (52 hours), or science/mathematics (52 hours). This dual emphasis lends itself to interdisciplinary instruction that is reflective of middle-level philosophy.

**Admission Requirements**

Upon completion of 45 hours, prospective majors must apply for acceptance into the program and will be evaluated based on the following performance criteria:

- Completion of CIED 1002/1011 Intro. to Education/Practicum with a grade of “C” or better,
- Minimum 2.70 GPA (including transfer hours).

**General Studies**

<table>
<thead>
<tr>
<th>HOURS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Literature (American, English, or World)</td>
</tr>
<tr>
<td></td>
<td>Social Science</td>
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<tr>
<td></td>
<td>PSYC 2003 General Psychology</td>
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<tr>
<td></td>
<td>COMM 1313 Communications</td>
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<tr>
<td></td>
<td>Laboratory Science</td>
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<tr>
<td></td>
<td>Health and Wellness</td>
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<tr>
<td></td>
<td>(HLSC 1002 Wellness Concepts, and PEAC 1621 Fitness Concepts)</td>
</tr>
<tr>
<td></td>
<td>Electives (defined by program)</td>
</tr>
<tr>
<td></td>
<td><strong>HIST 3383 Arkansas and the Southwest</strong></td>
</tr>
</tbody>
</table>

**Total Hours Required for General Studies**

| 47-50 |

**Pre-education Core Requirements**

- CIED 1002/1011 Intro. to Education/Practicum
- ETEC 2001/2002L Educational Technology
- CIED 3023 Survey of Exceptionalities
- CIED 3033 Classroom Learning Theory
- **Common Core for all middle-level education majors**
  - CIED 3053 The Emerging Adolescent (Prerequisites: CIED 1002/1011, PSYC 2003; pre- or co-requisite: CIED 3033)
  - CIED 3043 Intro. to Middle Level Principles and Methods (Prerequisite: CIED 3053)
  - CIED 3073 or 3073H Early Adolescent Literature (Prerequisite: CIED 3043; co-requisite: CIED 3063)
  - CIED 3063 or 3063H Literacy Strategies for Middle Level Learners (Prerequisite: CIED 3043; co-requisite: CIED 3073)

**Total Hours for Pre-education Core**

| 24 |

* Grade of “C” or higher is required
** Required for licensure

**Dual Areas of Concentration: As determined by State licensure requirements.**

<table>
<thead>
<tr>
<th>English/Social Studies</th>
<th>Social Studies/English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science/Math</td>
<td>Math/Science</td>
</tr>
<tr>
<td>Students must complete a minimum of 21 (24 for science) required hours in primary area and 9-12 restricted elective hours in supporting area.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours for Areas of Concentration**

| 51-52 |

**English/Social Studies**

- English
- WLIT 1123 World Literature II
- ENGL 2303 Survey of Engl Lit. From Beg. through 17th Cent.
- ENGL 4003 English Language and Composition for Teachers
- ENGL 2343 Surv. of Am. Lit. from Colonial through Naturalism
- ENGL 2353 Surv. of Mod. Am. Lit.
- ENGL 2013 Essay Writing, ENGL 2023 Creative Writing, or ENGL 3183
- Modern Engl Syntax and Style
- ENGL 4003 English Lang. and Comp. for Teachers
- ENGL 4303 Intro. to Shakespeare
- ENGL 3853 Topics in African-Am. Lit. or ENGL 4543 Studies in Lit. and Multiculturalism or DRAM 4463 African-American Theatre History 1950 - Present
- 3-hour course above 3000-level selected from Medieval, Renaissance (excluding Shakespeare), Restoration, or 18th Century Literature
- 3-hour course above 3000-level selected from 19th Century, 20th Century, or American Literature

**Social Studies**

- WCIV 1003 to be taken as University State Minimum Core Requirements
- ANTH 1023 Intro. to Cultural Anthropology
- GEOG 1123 Human Geography
- WCIV 1013 Western Civilization II
- 3 hours from Antiquity to Reformation:
  - HIST 3203, HIST 3263, HIST 4003, HIST 4013, HIST 4023, HIST 4043, HIST 4053, HIST 4073, HIST 4083, HIST 4213.
- 3 hours from Africa, Asia, Latin America, Near East history:
  - HIST 3033, HIST 3043, HIST 3233, HIST 3243, HIST 3263, HIST 3473, HIST 3503, HIST 4313, HIST 4323, HIST 4343, HIST 4353, HIST 4383
- 3-hour course selected from history, anthropology, economics, geography, or sociology

**Social Studies/English**

<table>
<thead>
<tr>
<th>HOURS</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Social Studies</td>
</tr>
<tr>
<td></td>
<td>WCIV 1003 to be taken as University State Minimum Core Requirements</td>
</tr>
<tr>
<td></td>
<td>PLSC 2003 to be taken as University State Minimum Core Requirements</td>
</tr>
<tr>
<td></td>
<td>HIST 2003 to be taken as University State Minimum Core Requirements</td>
</tr>
<tr>
<td></td>
<td>HIST 2013 History of American People</td>
</tr>
<tr>
<td></td>
<td>WCIV 1013 Western Civilization II</td>
</tr>
</tbody>
</table>
6 hours selected from the following:
HIST 3033, HIST 3043, HIST 3203, HIST 3233,
HIST 3473, HIST 3503,
HIST 4313, HIST 4323, HIST 4353, HIST 4383,
HIST 4333, HIST 4403, HIST 3263
ECON 2143 Basic Economics-Theory and Practice,
or ECON 3053 Economics for Elementary
Teachers
ECON 4033 History of Economic Thought or
ECON 410V Special Topics in Economics
GEOL 1113/1111L General Geology/Lab or
GEOL 1133/1131L Environmental Geology/Lab
GEOG 1123 Human Geography
ANTH 1023 Intro. to Cultural Anthropology
3 hours selected from the following:
ANTH 3003, ANTH 3033, ANTH 3123, ANTH
3213, ANTH 3473, ANTH 3503, ANTH 4123,
ANTH 4583
English
WLIT 1123 World Literature II
3 hours selected from the following: ENGL 2303
Surv. of Eng. Lit., from Beg. through 17th Century;
ENGL 2343 Am. Lit. Colonial - 1900; ENGL 2353
Surv. of Modern Am. Lit.
3 hours from the following: ENGL 3113 Folklore,
ENGL 3203 Poetry, ENGL 3213 Fiction; ENGL
3843 Topics in Mod. Am. Lit., ENGL 2343 Surv.
of Am. Lit. from Colonial through Naturalism,
ENGL 2353 Surv. of Mod. Am. Lit, ENGL 4003
Eng. Lang. and Comp for Teachers; ENGL 3853
Topics in African Lit. and Culture, or ENGL 4543
Lit and Multiculturalism or DRAM 4463 African
Am. Theatre
3-hour elective: English course above 3000 level
or WLIT course above 2333
ENGL 4303 Intro. to Shakespeare

Math/Science

Math
BIOL 1543/154L to be taken as University State
Minimum Core Requirements
GEOL 1113/1111L to be taken as University State
Minimum Core Requirements
MATH 2053 Finite Mathematics
MATH 2103 Discrete Mathematics
MATH 2213/2223 Survey of Mathematical
Structures I and II
MATH 2554/2564 Calculus I and II
MATH 3133 History of Mathematics
MATH 3773 Foundations of Geometry
MATH 1213 Plane Trigonometry
3 hours selected from MATH 3083 Linear Algebra;
STAT 2303 Principles of Statistics; STAT 3013
Intro. to Probability and Statistics

Science
CHEM 1053/1051L Chemistry in the Modern
World/Lab
BIOL 1613/1611 Plant Biology
CHEM 1053/1051L Chemistry in the Modern
World/Lab
ASTR 2003/2001L Survey of the Universe
BIOL 1603/1601L Principle of Zoology/Lab
GEOL 4643/4641L Historical Geology/Lab

Science/Math

Science
BIOL 1543/154L to be taken as University State
Minimum Core Requirements
GEOL 1113/1111L to be taken as University State
Minimum Core Requirements
CHEM 1053/1051L Chemistry in the Modern
World/Lab, or CHEM 1074/1071L Fundamentals
of Chemistry/Lab
ASTR 2003/2001L Survey of the Universe
BIOL 1613/1611L Plant Biology/Lab
GEOG 4353 Elements of Weather
GEOG 3333 Oceanography
PHYS 1023/1021L Physics and Human Affairs
GEOL 4643/4641L Historical Geology/Lab
4 hours selected from the following:
BIOL 1603/1601L Principles of Zoology/Lab;
BIOL 2504/2500L Survey of Plant Kingdom/Lab;
BIOL 2533/2531L Cell Biology/Lab
GEOL 3923H Earth Systems Science

Math
MATH 2213/2223 Survey of Mathematical
Structures I and II
MATH 2554 Calculus I
MATH 3133 History of Mathematics
MATH 3773 Foundations of Geometry
MATH 1213 Plane Trigonometry

NOTE: The program above describes the minimum requirements for
a degree in Middle-Level Education. Interested students should consult a
Middle-Level Program faculty adviser regarding licensure requirements.

Middle Level Education Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan for the
Middle Level Education major should see page 42 in the Academic
Regulations chapter for university core requirements. Four con-
centrations are offered under the Middle Level Education: English/
Social Studies, Social Studies/English, Math/Science, and Science/
Math. The eight-semester plan for English/Social Studies is listed
below and eight-semester plans for the other three concentrations are
listed in Section 2 of the Undergraduate Catalog of Studies, online at

Fall Semester 1
3 *ENGL 1013 Composition I
3 *MATH 1203 College Algebra (or higher)
4 ?Biological Science (Recommend BIOL 1543/1541L Prin of
Biology w/Lab)
3 ?Fine Arts or Humanities
3 ?US History
16 semester hours

Spring Semester 1
3 *ENGL 1023 Composition II
3 ?Social Science (Except PSYC 2003 & WCIV 1003)
4 ?Physical Science w/Lab
2 HLSC 1002 Wellness Concepts
1 PEAC 1621 Fitness Concepts
2 ?CIED 1002 Introduction to Education
1 ?CIED 1011 Practicum
16 semester hours
Fall Semester 2
3 *CIED 3023 Survey of Exceptionality
3 PSYC 2003 General Psychology
3 ANTH 1023 Introduction of Cultural Anthropology
3 Literature Elective (Recommend WLIT 1113 World Literature I
3 WCIV Western Civilization I
15 semester hours

Spring Semester 2
3 COMM 1313 Fundamentals of Communications
3 ENGL 2313 English Literature 1700-1900
3 *ETEC 2001/2002 Educational Technology w/lab
3 WLIT 1123 World Literature II
3 WCIV Western Civilization II
15 semester hours

Fall Semester 3
3 *CIED 3033 Classroom Learning Theory
3 HIST 3833 Arkansas and the Southwest
3 ENGL 2343 American Literature Colonial to 1900
3 †Fine Arts or Humanities
3 GEOG 1123 Human Geography
15 semester hours

Spring Semester 3
3 *CIED 3053 The Emerging Adolescent
3 ENGL 2353 Survey of Modern Literature
3 ENGL 4303 Intro to Shakespeare
3 19th Century or American Literature Elective
3 History Elective I – Antiquity to Reformation
0-3 ENGL 2003 Advanced Composition (or gain exemption)
15-18 semester hours

Fall Semester 4
3 *CIED 3043 Intro to Middle Level Principles
3 ENGL 4003 Composition for Teachers
3 African American Literature (ENGL 3853, ENGL 4543, or DRAM 4463)
3 History Elective II – African, Asian, Latin American, Near East
3 Medieval/Renaissance Literature Elective
15 semester hours

Spring Semester 4
3 *CIED 3063 Literacy Strategies for Middle Lvl Learners
3 *CIED 3073 Early Adolescent Literature
3 Literature Elective
3 ENGL 2013 Essay Writing, ENGL 2023 Creative Writing, or ENGL 2303 English Literature Beginning to 17th Century
3 HIST 4073 Renaissance and Reformation
15 semester hours

† University Core areas must be completed as outlined in Catalog of Studies, see page 40.
* Grade of “C” or better is required for these courses

Admission requirements for the Middle-Level M.A.T. degree program for initial licensure are as follows:
The Master of Arts in Teacher (M.A.T.) degree program in Middle Level Education is a 34-semester hour program. The M.A.T. degree is the initial licensure program for students at the University of Arkansas.

Prerequisites to the M.A.T. Degree Program: Students will be selected up to the maximum number designated for each cohort area of emphasis.

Admission Requirements:
1. Completion of the pre-education core on page 236 with a minimum of “C” in all courses
2. Completion of all prerequisite courses in teaching field
3. Passing scores on appropriate Praxis test
4. Satisfactory completion of Evaluation for Internship
5. Completion of a B.S.E. in Middle-Level Education (Social Studies/English, English/Social Studies, Math/Science, or Science/Math). Cumulative GPA of 3.00 in all previous courses
6. Admission to the Graduate School
7. Minimum GPA of 3.0 on all previous coursework.
8. Admission to the Teacher Education Program
9. Recommendation from the Department of Curriculum and Instruction based upon:
   a. Middle-level writing assessment
   b. Interview with middle-level education faculty and public school administrators and faculty
   c. Portfolio

SEE PAGES 260 FOR MIDDLE-LEVEL EDUCATION (CIED) COURSES

Secondary Education (SEED)
• Professors Besonen, Farah, Taylor, Totten
• Associate Professor Wavering
• Assistant Professor Lincoln

Secondary Schools Program
The Masters of Arts in Teaching (M.A.T.) is a degree program of 33-34 semester hours. The M.A.T. degree is the initial teacher licensure program for students at the University of Arkansas. Students licensing to teach in grades 7-12 will receive a degree from the J. William Fulbright College of Arts and Sciences with a specialization in one of the following areas: anthropology, biology, chemistry, communication, drama, economics, English, foreign language, geography, geology, history, journalism, mathematics, physics, political science, psychology, sociology, or any other appropriate degree.

Admission Requirements
Prerequisites to the M.A.T. Degree Program: Meeting or exceeding minimum requirements does not guarantee acceptance into the M.A.T. Admission requirements for the M.A.T. degree program for initial licensure are as follows:
1. Completion of an appropriate undergraduate degree program
2. Cumulative GPA of 3.0 on last 60 undergraduate hours
3. Admission to the Graduate School
4. Admission to Teacher Education Program
5. Completion of all prerequisite courses in teaching field.
   Completion of CIED 4023 Teaching in Inclusive Secondary Settings and CIED 4131 Practicum in Secondary Education.
   Competency in use of technology (see program for requirements).
6. Payment of internship fee

Refer to list of steps and deadlines for acceptance into the Secondary Education M.A.T. program, available in the Sylvia Hack Boyer Center for Student Services (bcss@uark.edu).

SEE PAGE 328 FOR SECONDARY EDUCATION (SEED) COURSES

Special Education (SPED)
• Professors Gartin, Smith
• Associate Professor Imbeau
• Assistant Professor Collins
• Instructor Jordan
State licensure requirements for special education changed effective January 1, 2002. The University of Arkansas no longer offers an undergraduate degree in special education. Information regarding the Master of Education in special education can be found in the University of Arkansas Graduate School Catalog.

SEE PAGE 331 FOR SPECIAL EDUCATION (SPED) COURSES

EDUCATIONAL LEADERSHIP, COUNSELING, AND FOUNDATIONS (ELCF)

Roy Farley
Department Head
234 Graduate Education Building
479-575-4207
E-mail: rfarley@uark.edu

Carleton Holt
Coordinator of Graduate Studies
251 Graduate Education Building
479-575-2207
E-mail: cholt@uark.edu

The Department of Educational Leadership, Counseling, and Foundations offers graduate-level courses in five distinctive academic and degree programs. Master’s, specialist, and doctoral degrees may be obtained in counselor education, educational administration, educational foundations and higher education. A master’s degree may be obtained in educational technology. Educational foundations also offers courses in research and statistics for all programs. Undergraduate courses are offered by counselor education and educational technology.

Counselor Education (CNED)
• Professors Farley, Greenwood
• Associate Professor Newgent
• Assistant Professors Lee, Kissingler
• Instructor Stephen
• Clinical Assistant Professor Robertson

SEE PAGE 263 FOR COUNSELOR EDUCATION (CNED) COURSES

Educational Administration (EDAD)
• Associate Professors Elliott, Holt
• Assistant Professors Capps, Kimbrell

SEE PAGE 273 FOR EDUCATIONAL ADMINISTRATION (EDAD) COURSES

Educational Technology (ETEC)
• Associate Professor Murphy
• Assistant Professor Brescia

SEE PAGE 280 FOR EDUCATIONAL TECHNOLOGY (ETEC) COURSES

Higher Education (HIED)
• Professors Gearhart, Hammons, Lucas, Miller
• Associate Professors Gohn, Murry
• Adjunct Associate Professor Brazzell

SEE PAGE 288 FOR HIGHER EDUCATION (HIED) COURSES

Educational Foundations (EDFD)
• Professors Lucas, Mulvenon, Stegman, Denny
• Associate Professor Turner

SEE PAGE 273 FOR EDUCATIONAL FOUNDATIONS (EDFD) COURSES

EDUCATION REFORM

Dr. Jay P. Greene
Department Head and Endowed Chair in Education Reform
201 Graduate Education Building
479-575-3172
E-mail: JPG@uark.edu

Gary W. Ritter
Endowed Chair in Education Policy
207 Graduate Education Building
479-575-4971
E-mail: garyr@uark.edu

The Department of Education Reform (EDRE / DER) is a new department in the College, established on July 1, 2005. The department has six endowed professorships, ten doctoral fellowships, and funds for research and projects.

The mission of the Department of Education Reform is to advance education and economic development in Arkansas and nationwide by focusing on the improvement of K-12 schools. The Department is committed to producing and disseminating high-quality research that will inform policymakers, scholars, parents, teachers, administrators and the general public about policies and practices that could improve the performance of schools in Arkansas and nationwide. By gathering a critical mass of leading researchers focused on education reform, the Department of Education Reform will be uniquely positioned to have a meaningful impact on education policy research and the quality of schools.

ELEANOR MANN SCHOOL OF NURSING (NURS)

Tom Kippenbrock
Director
217 Ozark Hall
479-575-3904
E-mail: nursing@uark.edu

• Professors Kippenbrock, Neighbors
• Associate Professors Barta, Lawson
• Assistant Professor Smith-Blair
• Instructors Buron, Malm, Meadows, Miller, Schneringer

The mission of the Eleanor Mann School of Nursing is to promote the health of society through education of professional nurses, research, and service. The school, as an established entity within the college and the University of Arkansas, Fayetteville, subscribes to the philosophy and stated mission of the University of Arkansas on teaching, research, and service. The School of Nursing provides nursing education to meet expanding health care needs. In recognition of the interrelationship between teaching, research, service, and
the practice of nursing, in the changing health care needs of society, the faculty aspires toward excellence in teaching, contributes to research in nursing, and promotes improved health care.

The philosophy and purposes of the education are a synthesis of the personal beliefs of the faculty in relation to the person, society, environment, health, nursing, education, the learning process, and the role of the graduates of the program.

The person is a unique five dimensional being of interrelated and inseparable systems (biological, intellectual, psychological, social, and spiritual) from which needs arise as the person develops throughout the life span. Each person is a member of a larger cultural, racial, and/or ethnic group and is unique in the way in which the dimensions are developed, intersected, and expressed. Environment influences the person’s health within each of these dimensions. The person is influenced by and interacts as a whole with the internal and external environment to preserve vital functions, dignity, and a meaningful existence.

Society is a dynamic and multicultural phenomenon functioning within the ever-changing environment. The basic unit in society is the family. It functions to socialize its members to cultural values and norms and is highly influential in shaping the health behaviors of its members. Individual persons and family groups combine and intersect to form and function as larger distinct and indistinct community units. These units also have needs that arise from biological, intellectual, psychological, social and spiritual dimensions. The health of the person, family, or community impinges on and affects the health of the others. Society has given nursing and other health care professionals the latitude and responsibility to assist clients (individuals, families, and communities) in meeting health care needs.

The environment, internal and external, consists of those forces that influence the dimensions of the client. These complex factors act upon the client and ultimately determine its form, survival, and evolution. When the forces affect health, nursing becomes an integral part of the environment to assist the client in maximizing health.

Health is a general condition involving the total client within the environment. Health is dynamic and relative, wherein the person exists at varying points along the wellness-illness continuum. Wellness and illness are relative states of health and may be a matter of one’s perception.

Nursing is a helping relationship that assists the client in achieving wellness. It is both an art and a science. Professional nursing is derived from a specialized body of knowledge. The professional nurse draws from various academic disciplines to diagnose and make treatment decisions. Critical thinking is essential to the diagnoses and treatment decisions in nursing. The professional nurse practices in a variety of settings and collaborates with other health care professionals to assist the client in promoting health, preventing illness, maintaining or restoring wellness, or to cope with death. The therapeutic and significant contribution of nursing is through performance in the roles of caregiver, manager, and teacher using research-based practice in health care. A critical-thinking approach known as the nursing process is used to meet health care needs.

Professional nursing begins with a Bachelor of Science degree. Nursing education offers a research base for nursing practice that promotes the ability of the nurse to effect change needed to improve health. It is a process by which knowledge is continually synthesized and directed toward meeting the health care needs of clients. The learner develops and applies intellectual, interpersonal, and psychomotor skills in assisting clients in a variety of settings. Professional nursing education develops critical thinking, and acceptance of responsibility for nursing interventions and accountability for outcomes. In the study of professional nursing, the student builds on a planned general education from the academic disciplines and acquires theoretical and specific knowledge to meet health care needs. In addition the curriculum provides opportunity for students with technical nursing education to expand their knowledge and scope of practice. The baccalaureate program establishes a foundation for graduate education in nursing and for continued personal and professional development.

Learning takes place within the student and is ultimately the responsibility of the student. Knowledge and skills are enhanced when the student derives satisfaction from the learning environment and has the opportunity to explore and express thoughts and feelings. Acquisition of knowledge and skills promotes development of the student and is manifested by a change in behavior.

Faculty have the responsibility to ensure the quality of the nursing program. They define levels of expectations for students and maintain standards of nursing practice. They focus on students’ learning needs when they select or manipulate the environment to enhance experiential learning. Faculty members guide and direct learning through the development and implementation of the curriculum and through planned periodic evaluations based on program criteria. In clinical agencies, faculty and practicing nurses are role models for students.

Within a climate of mutual respect, students and faculty share in an interdependent enterprise of learning, inquiry, and teaching. With guidance, students develop the ability to use critical thinking to integrate eclectic knowledge with current nursing theory and research-based practice. They learn personal and professional responsibility and accountability. Progress, or lack of, in meeting performance expectations and improvements necessary for success is identified by teacher evaluation and student self-evaluation.

The baccalaureate graduate, as a member of the discipline, uses knowledge from a research base to fulfill the roles of the nurse in contemporary society as a caregiver, manager, and teacher. On entry into practice the graduate performs the following:

1. Uses critical thinking in making clinical judgments to deliver holistic nursing care.
2. Uses theory and research-based knowledge to improve delivery of nursing care to meet health care needs of individuals, families, and communities.
3. Develops, implements, and evaluates health-related education based on assessed needs.
4. Applies information and health care technologies to assess, monitor, and support clients, families, and communities.
5. Designs, manages, and coordinates health care for individuals, families, and communities.
6. Uses ethical principles in nursing practice, conduct, and relationships with clients.
7. Identifies with the values of the profession and incorporates them into practice.

The baccalaureate nurse works singularly or in collaboration with other health care professionals in coordinating and promoting culturally sensitive health care. The Eleanor Mann School of Nursing at the University of Arkansas prepares students to enter the professional practice of nursing and/or pursue graduate-level nursing education. The curriculum provides the student with a theoretical base to practice professional nursing with diverse clients in various settings through the roles of caregiver, manager, and teacher. The program of study has been designed to emphasize one or more of these roles in each nursing course. Graduates of the program are eligible to apply to take the NCLEX examination for licensure as a registered nurse (R.N.). Persons convicted of a crime may not be eligible to take the NCLEX examination. A criminal background check is required before graduation and reported to the Arkansas State Board of Nursing as part of the procedures for application for licensure. The Bachelor of Science in Nursing degree (B.S.N.) is awarded after successful completion of the nursing curriculum.

The Eleanor Mann School of Nursing offers a limited number of scholarships specifically for nursing students admitted to the school. These scholarships are awarded by the scholarship committee of the School of Nursing and include the Banks, Beverly, Jerry Wade Davis, and Newell-Allen scholarships. The Eleanor Mann School of Nursing at the University of Arkansas is committed to providing high-quality nursing education and a strong foundation for career development in the field of nursing. The school is accredited by the Commission on Accreditation of Nursing Education (ACEN). The program meets the requirements for licensure as a registered nurse (R.N.) in the state of Arkansas. The baccalaureate program prepares students to meet the challenges of the 21st century nursing practice and to contribute to the improvement of health care.
**ADMISSION TO THE B.S.N. PROGRAM**

**Admission Policies**

Admission to the B.S.N. program is limited. Final approval for admission will be determined by the Eleanor Mann School of Nursing faculty. Requirements for admission into the professional program of study are as follows:

1. Overall minimum grade-point average (GPA) of 2.75. Transfer GPA will be factored in if it is to the student’s benefit. If the UA GPA is based on at least 12 hours of study and is greater than the transfer GPA, the UA GPA will be used. The transfer GPA will be factored in if the student has less than 12 hours at the University of Arkansas.
2. Students will be ranked according to GPA for admission to the program.
3. Applications for admission must be submitted by December 1 to be considered for fall semester admission and by June 15 for spring semester admission. Late applications will be considered on a space-available basis.
4. All pre-requisite requirements must be completed prior to beginning the nursing professional program of studies. Students applying for a spring semester admission must have all pre-requisites completed by the end of the preceding fall semester; students applying for a fall semester admission must have all pre-requisite courses completed by the end of the preceding summer semester. Additionally, the student must maintain the required 2.75 minimum GPA.
5. Students transferring from another nursing program must be eligible to return to that program to be considered for admission.
6. Students must meet the performance standards for the professional program of study.
7. CPR certification (American Heart Association program) is required.
8. The completed Hepatitis B vaccine series and Diphtheria-Tetanus (DT) must be verified.
9. Negative Tuberculin skin test or X-ray is required.
10. Diphtheria-Tetanus (DT) required
11. Health and liability insurance is required (check with the School of Nursing).
12. A criminal background check with fingerprinting is required and reported to the Arkansas State Board of Nursing.
13. Some clinical agencies require students to complete a negative drug screening and criminal background check before students can be placed in the agency. To complete appropriate clinical experiences, students will have to comply with these requirements.

**R.N. to B.S.N. Admission Policies**

1. College admission requirements.
2. Eleanor Mann School of Nursing admission policies.
3. Completion of an Arkansas State Board approved LPN or LPTN program or an NLNAC accredited out-of-state program.
4. Review of nursing courses for transfer credit by the School of Nursing.
5. Proof of, and maintenance of, an unencumbered license to practice as an LPN or LPTN in the state of Arkansas.
6. Advanced placement may vary based on the length of time since completion of the LPN or LPTN and the length of time of (or since) nursing employment.
7. Credit for courses listed below will be held in escrow. The student will receive credit for these courses upon successful completion of the program.
   - NURS 2032
   - NURS 3212
   - NURS 3313
   - NURS 3422/3424
   - NURS 3634/3643
   - NURS 3742/3752
   - NURS 3841L
   - NURS 4154/4164
   - NURS 4443/4453
   - RN students will be considered as a separate group for admission purposes.

**L.P.N./L.P.T.N. to B.S.N. admission policies**

1. College admission requirements.
2. Eleanor Mann School of Nursing admission policies.
3. Completion of an Arkansas State Board approved LPN or LPTN program or an NLNAC accredited out-of-state program.
4. Review of nursing courses for transfer credit by the School of Nursing.
5. Proof of, and maintenance of, an unencumbered license to practice as an LPN or LPTN in the state of Arkansas.
6. Advanced placement may vary based on the length of time since completion of the LPN or LPTN and the length of time of (or since) nursing employment.
7. Credit for courses listed below will be held in escrow. The student will receive credit for these courses upon successful completion of the program.
   - NURS 3313
   - NURS 2032
   - NURS 3422/3424
8. Students may receive credit for NURS 3634/3643 through validation examination.

**Performance Standards for Admission to and Progression in the Professional Program of Study**

Professional nurses must have the knowledge and ability to completely assist the biological, psychological, intellectual, social, and spiritual dimensions of the client. After acceptance, but before admission to the B.S.N. program, students must show documentation for current certification in cardiopulmonary resuscitation (CPR) for health-care providers (American Heart Association course). This requires the ability to successfully complete both the written and practical tests for certification. In addition, students admitted to the Eleanor Mann School of Nursing must meet the following abilities and expectations during their enrollment in the program:

1. **Critical Thinking.** Student nurses must be able to analyze data, explore interpretations, generate hypotheses, select actions, and evaluate outcomes related to nursing care of clients. In addition, applicants must be able to problem solve.
2. **Psychomotor.** Student nurses must be able to perform the following:
   a. assess clients through auscultation, percussion, palpation, and other diagnostic maneuvers.
   b. manipulate equipment necessary to assist the client to desired outcomes.
c. lift and move clients to provide safe care and emergency treatment.
d. perform cardiopulmonary resuscitation (CPR).
e. perform independently of others.
f. possess cognitive abilities to measure, calculate dosages, reason, analyze, and synthesize.

3. Communication. Student nurses must be able to perform the following:
   a. receive, translate, and import information by oral and written means according to standards of the English language and safe nursing practice.
   b. speak, hear, visually observe clients, and interpret nonverbal behavior.
   c. effectively communicate verbally and in writing with all health care providers.

4. Behavioral/Social Attributes. Students are required to have social skills and emotional health sufficient to provide safe, therapeutic care. The ability to function in stressful environments and meet physically and mentally stressful demands is essential. The study and practice of nursing requires strong emotional, intellectual, and physical capabilities. It is important for prospective nursing students to have a realistic view of the demanding curriculum before they decide to pursue the degree. Prospective students are encouraged to contact the School of Nursing if they have questions about their ability to function in the clinical settings.

Progression, Probation, Suspension, Withdrawal, and Dismissal

1. Any nursing course in which a letter grade of “D” or lower is received must be repeated before the student progresses (Repetition of courses depends on clinical space available).
2. Students who receive a grade of “D” or lower or withdraw from any nursing course for any reason must petition the school’s Admission and Advisement Committee for readmission to the nursing program. Final decisions for readmission rests with the nursing faculty.
3. Students must achieve a 70% exam average in every course in the professional program of study. Failure to do so in a course will result in failure of the course and possible dismissal from the program.
4. Junior Progression Exam Requirement (Students should contact their adviser for details).
5. Senior Progression Exam Requirement (Students should contact their adviser for details).
6. Students are limited to one petition for readmission. Readmission is limited by space availability.
7. Students who are dismissed from any clinical course will be suspended from all clinical courses until the dismissal is reviewed by the faculty of the school (Suspension means the student will not be permitted to attend any clinical assignment until the school reviews the issue).

Readmission Policies

Any student whose enrollment was interrupted to attend another college, the University’s transfer student admission policies would also apply for readmission.

Exit Policies

1. Students must complete the requirements for the degree within five years of enrolling in the first upper-division nursing course. If the student does not complete the Professional Program of Study within the five-year limit, nursing credits must be reevaluated.
2. All University of Arkansas and college requirements must be met.

NOTE: In addition to the program requirements, students must meet the University and college graduation requirements. This curriculum is subject to change to comply with national accreditation and the Arkansas State Board of Nursing Standards.

Requirements for Bachelor of Science in Nursing HOURS

University Core See Page XXX 36-39

Sciences with Labs (8 hours) must include
   CHEM 1074/1071L Fundamentals of Chemistry 8
   BIOL 1543/1541L Principles of Biology
Fine Arts/Humanities
   3 hours must include one of the following courses: PHIL 2003 Intro to Philosophy; PHIL 2103 Intro to Ethics; PHIL 2023 Logic; or PHIL 3103 Ethics and the Professions
Social Sciences
   3 hours must include HESC 1403 Lifespan Development 9

Additional General Studies
   EDFD 2403 Statistics in Nursing, or PSYC 2013 Intro. to Statistics for Psych 25-28
   BIOL 2013/2011L General Microbiology
   BIOL 2213/2211L Human Physiology
   BIOL 2443/2441L Human Anatomy
   General Electives: 4-7 credit hours
   NURS 2012 Nursing Informatics
   NURS 2022 Intro. To Professional Nursing Concepts
   NURS 2032 Therapeutic Comm.

Professional Nursing Program HOURS

Level I
   NURS 3212 Teaching and Health Promotion
   NURS 3312 Pharmacology in Nursing
   NURS 3314 Pathophysiology
   NURS 3321L Health Assessment
   NURS 3422 Nursing Concepts: Foundations of Professional Practice
   NURS 3424 Professional Role Implementation I: Caregiver

Level II
   NURS 3634 Nursing Concepts: Adult Health and Illness
   NURS 3643 Professional Role Implementation II: Caregiver
   NURS 3841L Professional Nursing Skills: Advanced
   NURS 3842 Research in Nursing

University of Arkansas, Fayetteville 242
NURS 3742 Nursing Concepts: Mental Health/ Illness  
NURS 3752 Professional Role Implementation III: Caregiver  
NURS 4154 Nursing Concepts: Children and Family  
NURS 4164 Professional Role Implementation IV: Teacher  
NURS 4242 Management in Nursing  
NURS 4263 Nursing Concepts: Older Adult Health/Ilness  
NURS 4273 Professional Role Implementation V: Manager  

Level III  
NURS 4443 Nursing Concepts: Critical Care  
NURS 4453 Professional Role Implementation VI: Role Synthesis  
NURS 4603 Nursing Concepts: Communities  
NURS 4613 Professional Role Implementation VII: Role Synthesis  
NURS 4712 Seminar in Nursing  

Total for Nursing  
124

Note: The minimum number of hours required to receive a baccalaureate degree at the University of Arkansas is 124 semester hours. The Nursing major is exempt from the eight semester degree plan as required by Act 1014 since the program is admissions-based. There is no guarantee that a student will meet the GPA requirement for admission. However, please refer to the College of Education and Health Profession’s Web site at http://coehp.uark.edu/ for specific information related to the admission criteria.

SEE PAGE 314 FOR ELEANOR MANN SCHOOL OF NURSING (NURS) COURSES

HEALTH SCIENCE, KINESIOLOGY, RECREATION, AND DANCE

Sharon Hunt  
Department Head  
306 HPER Building  
479-575-2857  
E-mail: sbhunt@uark.edu

The department offers programs leading to the B.S.E. degree with major emphasis in health science, kinesiology, or recreation.

Dance Activity (DEAC)  
• Instructor Mayes

SEE PAGE FOR DANCE ACTIVITY (DEAC) COURSES

Health Science (HLSC)  
• University Professor Young  
• Professor Jones (C.)  
• Associate Professor Turner  
• Visiting Assistant Professors Mink, Williams, Wyandt

The program in health science is designed to prepare candidates for a variety of career options in the vast field of health education and health promotion. Career opportunities may include planning, development, and delivery of health programs in various settings. These settings may include hospitals, government agencies, non-profit organizations, community organizations, corporations, and other places of occupation. Graduates of this program should be well prepared to enter the work force at an entry level position in community health or graduate programs of study in such areas as health education and health promotion, corporate health, public health, health care administration, and other allied health professional schools.

The candidate for the Bachelor of Science in Education degree with a major in health science will focus on community health. All students must complete the University Core requirements as listed on page 40. In addition, all students must take the courses listed below under required general studies for the health science major and the additional health science major requirements. A minimum of 127 semester hours is required for graduation in the major of health science.

NOTE: A student preparing to teach in the public schools in kinesiology and health science must major in kinesiology with a K-12 concentration, complete pre-M.A.T. requirements, graduate with a cumulative GPA of 2.70 or higher, and earn a Master of Arts in Teaching degree (M.A.T.) to be eligible to apply for initial teacher licensure in the State of Arkansas. Students planning on applying for the M.A.T. and other post-baccalaureate programs should consult the Graduate School Catalog for information on prerequisites and requirements.

Curriculum for a Major in Health Science

<table>
<thead>
<tr>
<th>COURSES</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Minimum Core (See page 40)</td>
<td>35-38</td>
</tr>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>ENGL 1013 Composition I</td>
<td>6-9</td>
</tr>
<tr>
<td>ENGL 1023 Composition II</td>
<td></td>
</tr>
<tr>
<td>ENGL 2003 Advanced Composition (exemption by examination or credit in ENGL 201 or grade of at least &quot;B&quot; in ENGL 1013 and &quot;A&quot; in ENGL 1023 at Fayetteville campus)</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1203 College Algebra or higher, depending on specific concentration requirements</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>8</td>
</tr>
<tr>
<td>See specific concentration requirements</td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Humanities</td>
<td>6</td>
</tr>
<tr>
<td>See page 40 for listing of approved courses</td>
<td></td>
</tr>
<tr>
<td>U.S. History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2003 History of American People to 1877 or HIST 2013 History of American People 1877 to Present or PLSC 2003 American National Government</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>PSYC 2003, General Psychology</td>
<td></td>
</tr>
<tr>
<td>SOCI 2013 General Sociology</td>
<td></td>
</tr>
<tr>
<td>3 hours, see page 40 for listing of approved courses</td>
<td></td>
</tr>
<tr>
<td>Required general studies for the Health Science Major</td>
<td>12</td>
</tr>
<tr>
<td>Literature Elective (3 hours)</td>
<td></td>
</tr>
<tr>
<td>COMM 1313 Fundamentals of Communication</td>
<td></td>
</tr>
<tr>
<td>Computer Course (3 hrs. adviser approved)</td>
<td></td>
</tr>
<tr>
<td>HLSC 1002 Wellness Concepts</td>
<td></td>
</tr>
<tr>
<td>NOTE: HLSC 1103 is recommended in lieu of HLSC 1002</td>
<td></td>
</tr>
<tr>
<td>PEAC 1621 Fitness Concepts</td>
<td></td>
</tr>
<tr>
<td>Health Science Major Requirements</td>
<td>80</td>
</tr>
<tr>
<td>HESC 1213 Nutrition in Health</td>
<td></td>
</tr>
<tr>
<td>HLSC 1203 Prevention of Drug Abuse</td>
<td></td>
</tr>
</tbody>
</table>
College of Education and Health Professions

HLSC 1303 Introduction to Human Sexuality
HLSC 2613 Foundations in Health Education
HLSC 2653 Intro. to Community Health
HLSC 2662 Terminology/Health Professions
HLSC 3003 Practicum in Community Health
HLSC 3633 First Responder – First Aid
HLSC 3643 Community Health Plan/Promotion
HLSC 3663 Principles/Practice of Mental Health
HLSC 3683 Health Care Consumerism
HLSC 404V Community Health Preceptorship 6
HLSC 4603 Application of Health Behavior Theories for Health Education
HLSC 4623 Human Diseases
JOUR 1033 Journalistic Style and Usage
BIOL 2013/2011L General Microbiology
PSYC 3093 Childhood and Adolescence
PSYC Elective (3 hours)
BIOL 1603/1601L Principles of Zoology and Lab, or BIOL 1613/1611L Plant Biology and Lab
BIOL 2213/2211L Human Physiology
BIOL 2443/2441L Human Anatomy
SCWK 3163 On Death and Dying
PSYC 4023 Adulthood and Aging, or SCWK 3183 The Elderly Citizen
Health science electives (5 hours; adviser approved)

Health Science Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan for the Health Science major should see page 42 in the Academic Regulations chapter for university core requirements.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 College Algebra (or higher)
3 ‡U.S. History
3 ‡Social Science (except PSYC 2003 & SOCI 2013- recommend HESC 2413)
4 BIOL 1543/1541L Principals of Biology w/Lab
16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 ‡Fine Arts or Humanities (recommend PHIL 2103)
2-3 *HLSC 1002 Wellness Concepts (recommend HLSC 1103)
1 PEAC 1621 Fitness Concepts
3 HLSC 2613 Foundations in Health Education or HLSC 2653 Intro to Comm Health
3 HLSC 1213 Nutrition in Health
15-16 semester hours

Fall Semester 2
0-3 ENGL 2003 Advanced Composition (or Exempt)
3 HLSC 1203 Prevention of Drug Abuse or HLSC 3643 Community Health Planning and Promotion
3 JOUR 1033 Fundamentals of Journalism
4 CHEM 1103/1101L University Chemistry I w/Lab
3 PSYC 2003 General Psychology
13-16 semester hours

Spring Semester 2
2 HLSC 2662 Terminology for the Health Professions
3 SOCI 2013 General Sociology
3 HLSC 1303 Introduction to Human Sexuality
3 COMM 1313 Fundamentals of Communications
4 BIOL 1603/1601L General Zoology w/Lab or BIOL 1613/1611L Plant Biology w/Lab
3 HLSC 2613 Foundations in Health Education or HLSC 2653 Intro to Community Health
18 semester hours

Fall Semester 3
3 HLSC 3643 Community Health Planning & Promotion or HLSC 4623 Human Diseases
3 HLSC 4623 Human Diseases or HLSC 4603 Applied Health Behavior Theory
3 PSYC 3093 Childhood & Adolescence
4 BIOL 2443/2441L Human Anatomy w/Lab
3 ‡Fine Arts or Humanities (recommend HUMN 2003)
16 semester hours

Spring Semester 3
3 HLSC 3683 Health Care Consumerism or HLSC 3663 Principles/Practice of Mental Health
3 HLSC 3003 Practicum in Community Health
4 BIOL 2213/2211L Human Physiology w/Lab
3 Health Science Elective (recommend HLSC 4613)
16 semester hours

Fall Semester 4
3 HLSC 4603 Appl Hlth Behavior Theories in Hlth Ed or HLSC 4623 Human Diseases
3 HLSC 3663 Prin/Practice of Mental Health
3 SCWK 3163 On Death and Dying
4 BIOL 2213/2211L Human Physiology w/Lab
3 Health Science Elective (recommend HLSC 4613)
16 semester hours

Spring Semester 4
6 HLSC 404(v) Comm Hlth Preceptorship
3 PSYC 4023 Adulthood & Aging or SCWK 3183 The Elderly Citizen
3 HLSC 3683 Health Care Consumerism or HLSC 3663 Principles/Practice of Mental Health
1-2 *Health Science Elective (recommend HLSC 2101)
16-17 semester hours

127-130 total hours

† University Core areas must be completed as outlined in Catalog of Studies, see page 40.
* One hour of health science elective is required if student elects to take HLSC 1103. Two hours of health science electives are required if student elects to take HLSC 1002.

SEE PAGE FOR HEALTH SCIENCES (HLSC) COURSES

Kinesiology (KINS)

University Professor Di Brezzo
• Professors Fort, Gorman, Riggs
• Associate Professor Lirgg
• Clinical Associate Professor Kern
• Assistant Professor Calleja
• Clinical Assistant Professors Bonacci, Smith-Nix
• Instructors Forbes, Mayes,
The program in kinesiology is designed to prepare candidates for a variety of career options in the vast field of movement science. Career opportunities may include teaching physical education, coaching, analyzing and prescribing fitness programs, athletic training, or preparation for professional programs in allied health. Graduates of this program should be well prepared to enter graduate programs of study in such areas as pedagogy or adapted physical education, exercise physiology, biomechanics, athletic training, sport management, medical school, physical therapy school, and other allied health professional schools.

The candidate for the Bachelor of Science in Education degree with a major in kinesiology must select one of five concentrations:

I. K-12 Teaching Physical Education/Wellness & Leisure
II. Exercise Science – Exercise Physiology/Biomechanics
III. Exercise Science – Pre-Professional
IV. Exercise Science – Fitness Specialist
V. Exercise Science – Pre-Athletic Training

All students must complete the state minimum core (University Core) requirements as listed on page 40. In addition, all students must take the required general studies for the kinesiology major and the kinesiology core requirements listed below. As part of the University Core requirements, specific math and science courses are required within the kinesiology major and concentrations. A student preparing to teach in the public schools must select the K-12 teaching concentration, obtain a “C” or better in the pre-education core, complete the stages of admission for initial licensure as listed on page 231, have a cumulative GPA of 2.70 or above, and be admitted to Graduate School to be eligible to apply for initial teacher licensure. Students interested in obtaining an endorsement in coaching should contact the Coordinator of Teacher Education. Students applying for other post-baccalaureate programs should inquire as to prerequisite requirements. Students majoring in kinesiology with a concentration in exercise science (concentrations II, III, IV, or V) must earn a grade of “C” or better in KINS 3153, KINS 3353, and KINS 3533, and meet the appropriate concentration requirements. A minimum of 124 semester hours is required for graduation in the major of kinesiology.

Curriculum for a Major in Kinesiology

<table>
<thead>
<tr>
<th>Course Description</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Minimum Core (See page 40)</td>
<td>35-38</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>3 hours include PSYC 2003, General Psychology</td>
<td></td>
</tr>
<tr>
<td>Required general studies for the Kinesiology Major</td>
<td>8-9</td>
</tr>
<tr>
<td>COMM 1313 Speech</td>
<td></td>
</tr>
<tr>
<td>HLSC 1002 Wellness Concepts</td>
<td></td>
</tr>
<tr>
<td>PEAC 1621 (except for K-12 concentration)</td>
<td></td>
</tr>
<tr>
<td>Literature elective</td>
<td>3</td>
</tr>
<tr>
<td>Kinesiology Core</td>
<td>12</td>
</tr>
<tr>
<td>KINS 1013 Careers in Kinesiology: A History and an Overview</td>
<td></td>
</tr>
<tr>
<td>KINS 2223 Motor Development</td>
<td></td>
</tr>
<tr>
<td>KINS 3153 Exercise Physiology (for exercise science concentrations II-V) or KINS 3163 Exercise Physiology: Theory and Application (for K-12 concentration I)</td>
<td></td>
</tr>
<tr>
<td>KINS 3353 Mechanics of Human Movement Concentration I: K-12 Teaching Physical Education/Wellness &amp; Leisure</td>
<td></td>
</tr>
<tr>
<td>BIOL 1543/1541 Principles of Biology (hours counted in the state minimum core)</td>
<td></td>
</tr>
<tr>
<td>BIOL 2443/2441L Human Anatomy (hours counted in the state minimum core)</td>
<td></td>
</tr>
</tbody>
</table>

Exercise Science Core for Concentrations II and III

- BIOL 2443/2441L Human Anatomy (hours counted in the University minimum core)
- BIOL 2213/2211L Human Physiology (hours counted in the University minimum core)
- CHEM 1103/1101L University Chemistry I
- CHEM 1123/1121L/1120D University Chemistry II
- PHYS 2033/2031L/2030D College Physics II
- HESC 1213 Nutrition in Health
- PSYC 4183 Physiological Psychology
- CNEE 3053 The Helping Relationship
- KINS 3533 Laboratory Techniques
- KINS 405V Independent Study (3 hrs.) or KINS 4903 Internship
- KINS 4323 Analytical Basis/Movement
- KINS 4733 Senior Seminar
- KINS 4833 Exercise Appl/Spec Pops

Concentration II: Exercise Science – Exercise Physiology/Biomechanics

Additional requirements

- BIOL 1543/1541L Principles of Biology
- PSYC 2013 Intro to Statistics for Psych. or adviser-approved statistics course
- MATH 2043 Survey of Calculus (hours counted in the state minimum core)
<table>
<thead>
<tr>
<th>Concentration III: Exercise Science – Pre-Professional</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Science Core</td>
<td>40</td>
</tr>
<tr>
<td>Additional requirements</td>
<td>17</td>
</tr>
<tr>
<td>PSYC 2013 Intro to Statistics for Psych or adviser-approved statistics course</td>
<td></td>
</tr>
<tr>
<td>MATH 2043 Survey of Calculus (depending on post-baccalaureate plans, see adviser) (hours counted in the state minimum core)</td>
<td></td>
</tr>
<tr>
<td>CHEM 3603/3601L/3600D Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 3613/3611L/3610D Organic Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM 3813 Intro to Biochemistry</td>
<td></td>
</tr>
<tr>
<td>Media course</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>8-11</td>
</tr>
</tbody>
</table>

See adviser for approved electives

<table>
<thead>
<tr>
<th>Concentration IV: Exercise Science – Fitness Specialist</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Science Core</td>
<td>33</td>
</tr>
<tr>
<td>BIOL 2443/2441L Human Anatomy (hours counted in the university minimum core)</td>
<td></td>
</tr>
<tr>
<td>BIOL 2213/2211L Human Physiology (hours counted in the university minimum core)</td>
<td></td>
</tr>
<tr>
<td>CHEM 1103/1101L University Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 1123/1121L/1120D University Chemistry II</td>
<td></td>
</tr>
<tr>
<td>HESC 1213 Nutrition in Health</td>
<td></td>
</tr>
<tr>
<td>CNED 3053 The Helping Relationship</td>
<td></td>
</tr>
<tr>
<td>KINS 3533 Laboratory Techniques</td>
<td></td>
</tr>
<tr>
<td>KINS 405V Independent Study (3 hrs.) or KINS 4903 Internship</td>
<td></td>
</tr>
<tr>
<td>PSYC 4323 Analytical Basis/Movement</td>
<td></td>
</tr>
<tr>
<td>KINS 4733 Senior Seminar</td>
<td></td>
</tr>
<tr>
<td>KINS 4833 Exercise Appl/Specific Pops</td>
<td></td>
</tr>
<tr>
<td>Additional requirements</td>
<td>25</td>
</tr>
<tr>
<td>Math 1213 Plane Trigonometry</td>
<td></td>
</tr>
<tr>
<td>CHEM 2613/2611L/2610D Organic Physiol. Chem</td>
<td></td>
</tr>
<tr>
<td>PSYC 3023 Abnormal Psychology</td>
<td></td>
</tr>
<tr>
<td>MGMT 3563 Management Concepts in Org. Behavior</td>
<td></td>
</tr>
<tr>
<td>MKTT 3433 Principles of Marketing (Pre-requisite: ECON 2013 and ECON 2023 or ECON 2143 or AGEC 1103 and AGEC 2103. Any of these ECON courses will count towards social science state minimum core requirements)</td>
<td></td>
</tr>
<tr>
<td>KINS 4773 Performance and Drugs</td>
<td></td>
</tr>
<tr>
<td>HESC 2203 Nutrition for Exercise and Sport</td>
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</tr>
<tr>
<td>Media course</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>7-10</td>
</tr>
</tbody>
</table>

See adviser for approved electives

<table>
<thead>
<tr>
<th>Concentration V: Exercise Science – Pre-Athletic Training</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Science Core</td>
<td>30</td>
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<tr>
<td>BIOL 2443/2441L Human Anatomy (hours counted in the state minimum core)</td>
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</tr>
<tr>
<td>BIOL 2213/2211L Human Physiology (hours counted in the state minimum core)</td>
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</tr>
<tr>
<td>CHEM 1103/1101L University Chemistry I</td>
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</tr>
<tr>
<td>HESC 1213 Nutrition in Health</td>
<td></td>
</tr>
<tr>
<td>CNED 3053 The Helping Relationship</td>
<td></td>
</tr>
<tr>
<td>KINS 3533 Laboratory Techniques</td>
<td></td>
</tr>
<tr>
<td>KINS 405V Independent Study (3 hrs.) or KINS 4903 Internship</td>
<td></td>
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<tr>
<td>KINS 4323 Analytical Basis/Movement</td>
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<tr>
<td>KINS 4733 Senior Seminar</td>
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<tr>
<td>KINS 4833 Exercise Appl/Specific Pops</td>
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<tr>
<td>Additional requirements</td>
<td>30</td>
</tr>
<tr>
<td>BIOL 1543/1541L Principles of Biology</td>
<td></td>
</tr>
<tr>
<td>ETEC 2001/2002L Educational Technology</td>
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</tr>
<tr>
<td>MATH 1213 Plane Trigonometry</td>
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<tr>
<td>PSYC 3023 Abnormal Psychology</td>
<td></td>
</tr>
<tr>
<td>KINS 2393 Prevention and Care/Athletic Injuries</td>
<td></td>
</tr>
<tr>
<td>KINS 3093 Application Techniques in Athletic Training</td>
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</tr>
<tr>
<td>KINS 4773 Performance and Drugs Professions</td>
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</tr>
<tr>
<td>HLSC 2662 Terminology for the Health Professions</td>
<td></td>
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<tr>
<td>HLSC 3633 First Responder – First Aid</td>
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<tr>
<td>HESC 2203 Nutrition for Exercise and Sport</td>
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</tr>
<tr>
<td>Electives</td>
<td>6-9</td>
</tr>
</tbody>
</table>

See adviser for approved electives

Kinesiology Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan in Kinesiology should see page 42 in the Academic Regulations chapter for university requirements of the program. Kinesiology has five concentrations. The eight semester plan for the K-12 concentration is listed below. Eight-semester plans for the other four concentrations are available in Section 2 of the Catalog of Studies, online at http://catalog-ofstudies.uark.edu.

<table>
<thead>
<tr>
<th>K-12 Concentration</th>
<th>Fall Semester 1</th>
<th>Spring Semester 1</th>
<th>Fall Semester 2</th>
<th>Spring Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16 semester hours</td>
<td>17 semester hours</td>
<td>16 semester hours</td>
<td>17 semester hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall Semester 1</th>
<th>3 ENGL 1013 Composition I</th>
<th>3 †Social Science (except PSYC 2003)</th>
<th>4 BIOL 1543/1541L Principles of Biology w/Lab</th>
<th>3 ETEC 2001/2002L Educational Technology w/lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Semester 1</td>
<td>3 ENGL 1023 Composition II</td>
<td>3 MATH 1203 College Algebra (or higher)</td>
<td>3 †Fine Arts or Humanities</td>
<td>3 †U.S. History</td>
</tr>
<tr>
<td>Fall Semester 2</td>
<td>3 KINS 2223 Motor Development</td>
<td>3 PSYC 2003 General Psychology</td>
<td>3 PHED 2003 Teaching Styles/ less/Plans</td>
<td>3 PHED 2013 Tch. Progres. &amp; Assess./Basic Skills</td>
</tr>
<tr>
<td>Spring Semester 2</td>
<td>3 COMM 1313 Fundamentals of Communications</td>
<td>3 †Social Science (except PSYC 2003)</td>
<td>3 PHED 2023 Tch. Progres. &amp; Assess./Adv. Skills</td>
<td></td>
</tr>
</tbody>
</table>
The program of recreation is designed to prepare candidates for a variety of career opportunities in the field of recreation and parks. Career opportunities may include park and recreation directors for a city, therapeutic recreation specialists, fitness center managers, state and national park managers, camp administrators, or work in YMCAs, Boys and Girls Clubs, or other youth-serving agencies. Graduates of this program should be well prepared to enter the recreational workforce at an entry level position or pursue graduate studies in such areas as recreation management, sport management, or other allied health professional schools.

The candidate for the Bachelor of Science in Education degree with a major in recreation must select a concentration of study in an area of interest with help from an academic adviser from the recreation faculty. Each concentration is developed individually to meet specific career goals. Concentrations are 18-21 hours, generally in academic areas other than the recreation program. Examples of concentrations of study include, but are not limited to, public recreation, children and families, fitness club management, commercial recreation, aquatic management, therapeutic recreation, camp administration, outdoor leadership, community sports, youth at risk, and outdoor recreation.

All students must complete the University Core requirements as listed on page 40. In addition, all students must take the required general studies for the recreation core requirements listed below. Recreation majors must obtain a “C” or better in all courses beginning with the alpha code RECR. To enroll in RECR 440V, students must have a 2.50 GPA or better in RECR core and concentration courses. Many courses in the recreation curriculum are taught in sequential order. Please check catalog course descriptions for prerequisites.

There are several experiential requirements within the recreation core. Students are required to do three practicum experiences (RECR 201V) in three different agencies. Each experience totals 45 hours. A more intense experience of an internship (RECR 440V) requires a minimum of 400 hours or work full time for 12-15 weeks in an agency with a qualified park and recreation professional. Students in the recreation program must obtain one instructor-level certification and a second certification in another area of expertise, three certifications which must be appropriate to recreation and be pre-approved by the recreation program. For additional information regarding these certifications see a recreation faculty adviser. Certifications must be valid at the time of graduation and be completed before a grade will be assigned in RECR 4013 Contemporary Issues in Leisure. Examples of these certifications include, but are not limited to, water safety instructor, aerobics instructor, American Red Cross canoeing instructor, first-aid instructor, and hunter safety instructor. A minimum of 124 hours are required for graduation in the major of recreation.

An undergraduate minor in recreation is also available to students enrolled in other colleges. Students with interests related to the recreation profession such as business, biology, human environmental science, or horticulture may elect the 15-hour minor. This minor could enhance future career opportunities.

Curriculum for a Major in Recreation

| HOURS |
|-----------------|-----------------|
| University Minimum Core | 35-38 |
| US History | 3 |
| 3 hours must include PLSC 2003 American National Government | 9 |
| Social Sciences | 3 |
| 3 hours must include PSYC 2003, General Psychology | 3 |
| 3 hours must include SOCI 2013 General Sociology | 12 |
| See page 40 for listing of approved courses | |
| Required General Studies for the Recreation Major | |
| Literature/History/WCIV elective | 3 |
| COMM 1313 Fundamentals of Communication | |
| HLSC 1002 Wellness Concepts | |
| PEAC 1621 Fitness Concepts | |
| Adviser Approved Computer Class | 3 |
| Recreation Core | 51 |
| RECR 1003 Professional Foundations of Leisure | |
| RECR 1023 Recreation and Natural Resources | |
| RECR 201V Recreation Practicum (three one-credit experiences) | |
| RECR 2063 Commercial Recreation and Tourism Enterprise | |
| RECR 2813 Leadership Techniques in Recreation | |

SEE PAGE 297 FOR KINESIOLOGY (KINS) COURSES
RECR 3833, Program Planning in Recreation
RECR 3843 Planning, Design and Maintenance for Recreation
RECR 3853 Leisure Behavior
RECR 3873 Sport and Recreation Risk Management
RECR 4003 Innovative Practices in Recreation
RECR 4013 Contemporary Issues in Leisure
RECR 4083 Research and Evaluation in Recreation
RECR 4093 Fundamentals of Therapeutic Recreation
RECR 440V Internship (9 hours)
HLSC 3633 First Responder-First Aid

Directed Study Concentration
Selected with help from an academic adviser from the recreation faculty.
Adviser approved electives

Curriculum Requirements for a Minor in Recreation
RECR 1003 Professional Foundations of Leisure
RECR 2813 Leadership Techniques in Recreation
RECR 3833 Program Planning in Recreation
RECR elective course selected to complement major (see adviser)

Note: The minimum number of hours required to receive a baccalaureate degree at the University of Arkansas is 124 semester hours. The Recreation major is exempt from Act 1014, which requires eight-semester degree plans for most majors, because students are recommended to register for RECR 440V (Internship) after the completion of their course work. This is necessary because the recreation agencies have their busiest season in the summer. For a recommended nine-semester plan, however, please refer to the College of Education and Health Profession’s Web site at http://coehp.uark.edu/.

SEE PAGE FOR RECREATION (RECR) COURSES
SEE PAGE FOR PHYSICAL EDUCATION ACTIVITIES (PEAC) COURSES

REHABILITATION, HUMAN RESOURCES, AND COMMUNICATION DISORDERS (RHRC)
Barbara E. Hinton
Department Head
100 Graduate Education Building
479-575-4758
E-mail: bhinton@uark.edu

Fredrick M. Nafukho
Assistant Department Head
213 Graduate Education Building
479-575-4898
E-mail: nafukho@uark.edu

The Department of Rehabilitation, Human Resources, and Communication Disorders offers the B.S.E. with an emphasis in vocational education and the B.S.E. in communication disorders. The M.Ed. workforce development education, M.A.T. in vocational education, M.S. with an emphasis in speech pathology, M.S. in rehabilitation, Ed.D. in adult education, Ed.D. in vocational education, and Ph.D. in rehabilitation are also offered.

Communication Disorders (CDIS)

201 Speech and Hearing Clinic
479-575-4509

- Professor Shadden
- Associate Professor Toner
- Assistant Professor Hagstrom
- Research Associate Aslin
- Instructor McGehee

An undergraduate major in communication disorders leads to the B.S.E. degree and prepares students for graduate studies (master’s level) in speech-language pathology and audiology. The minimum requirements for all students in the college are listed under general studies on page 233.

Admission to the B.S.E. Major Degree Program in Communication Disorders

All students declaring an undergraduate major in communication disorders are accepted as tentative candidates to the undergraduate program. However, formal admission to the program is limited. Students must apply for admission to the undergraduate B.S.E. degree program in communication disorders prior to taking junior- and senior-level classes in the major. Requirements for admission include the following:

- Completion of the admission application form.
- Junior status at the time that 3000-level courses will be taken.
- An overall minimum GPA of 3.0 over the first four semesters (50-60 hours) of college course work. Under special circumstances, students may petition the faculty to waive the 3.0 GPA requirement.
- Satisfactory completion of an admission interview with designated members of the faculty.

Students who do not meet admission criteria for the B.S.E. degree program in communication disorders in any given year may reapply in subsequent years.

Requirements for the program in Communication Disorders

University Core Required for Communications Disorders
ENGL 2003 Advanced Comp must be taken, no exemption of this course is allowed
Science with Lab
Biol 1543/1541L
Choose one of the following:
PHYS 1023/1021L
PHYS 2013/2011L
CHEM 1074/1071L
Fine Arts and Humanities
3 hours must be WLIT 1113
Social Science
3 hours must be PSYC 2003
General Studies
COMM 1313 Fundamentals of Communication
HLSC 2662 Terminology for the Health Professions

- Associate Professors Nafukho, Orr, Thompson, (C.), Thompson (D.)
- Assistant Professors Banks, Beck, Brooks, Mungania

SEE PAGE 241 FOR ADULT EDUCATION (ADED) COURSES
Communication Disorders Core
CDIS 2253 Intro. to Communicative Disorders
CDIS 3103 Intro. to Audiology
CDIS 3124 Normal Phonological and Articulatory Processes, and CDIS 3120L Phonetic Transcription Lab
CDIS 3203 Articulation Disorders
CDIS 3213 Anatomy and Physiology of Speech and Hearing Mechanisms
CDIS 3224 Language Development in Children
CDIS 3233 Intro. to Clinical Practice
CDIS 4133 Intro. to Aural Rehab
CDIS 4233 Clinical Assessment of Speech and Language Disorders
CDIS 4223 Language Disorders in Children
CDIS 4253 Neurological Bases of Communication
CDIS 4273 Communication Behavior and Aging
Electives to meet 124 hours

Total for Communication Disorders 39-40

Communication Disorders Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan in Communication Disorders should see page 42 in the Academic Regulations chapter for university requirements of the program. An eight-semester plan for the Honors Option is available at the College of Education and Health Profession’s Web site.

ALL CDIS students are accepted as tentative candidates. Students must apply for formal admission to the undergraduate B.S.E. degree program in CDIS prior to taking junior- and senior-level classes in the major. Refer to page 230 for admission criteria.

Fall Semester 1
3 ENGL 1013 Composition I
3 MATH 1203 College Algebra (or higher)
4 BIOL 1543/1541L Principals of Biology w/Lab
3 †U.S. History.
3 Elective
16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
3 †Fine Arts or Humanities (except category C)
3 †Social Science (except PSYC 2003)
6 Electives
15 semester hours

Fall Semester 2
3 WLIT 1113 World Literature
3 CDIS 2253 Intro to Communicative Disorders
3 PSYC 2003 General Psychology
4-5 PHYS 1023/1021L Physics & Human Aff. or CHEM 1074/1071L Fund. of Chem
3 Elective
16-17 semester hours

Spring Semester 2
2 HLSC 2662 Terminology for the Health Professions
3 †Social Science (except PSYC 2003)
3 COMM 1313 Fundamentals of Communications
7-8 Electives
15-16 semester hours

Fall Semester 3
4 CDIS 3124 Normal Phonology & Articulation
0 CDIS 3120L Phonetic Transcription Lab
3 CDIS 3213 Anatomy of Speech and Hearing Mechanism
4 CDIS 3224 Language Development in Children
0 CDIS 3220L Language Transcription Lab
3 Elective
14 semester hours

Spring Semester 3
3 CDIS 3203 Articulation Disorders
3 CDIS 3233 Introduction to Clinical Practice
3 CDIS 4223 Language Disorders in Children
3 ENGL 2003 Advanced Comp (No exemption) or ENGL 2013 Essay Writing
3 Elective
15 semester hours

Fall Semester 4
3 CDIS 3103 Intro. To Audiology
3 CDIS 4253 Neurological Bases of Communication
3 CDIS 4273 Communication Behavior and Aging
6 Electives (Recommend: CDIS 4001 Clinical Practicum: Undergraduate)
16 semester hours

Spring Semester 4
3 CDIS 4133 Intro. to Aural Rehab.
3 CDIS 4213 Intro to Speech and Hearing Science
3 CDIS 4183 Assessment of Speech and Language Disorders
6 Electives (Recommend: CDIS 4001 Clinical Practicum: Undergraduate)
16 semester hours

124 total hours

† Must meet University Core, see page 40 in the Catalog of Studies.

SEE PAGE XXX FOR COMMUNICATION DISORDERS (CDIS) COURSES

Rehabilitation (RHAB)
100 Graduate Education Building
479-575-4758

• University Professor Roessler
• Professors Anderson, Watson
• Research Professors Boone, Schroedel
• Assistant Professor Williams
• Research Assistant Professors Cochran, Sabik

SEE PAGE 326 FOR REHABILITATION (RHAB) COURSES

VOCATIONAL EDUCATION (VOED)

• Professors Biggs, Daugherty, Hinton, Thompson (C.)
• Associate Professors De Vore, Nafukho, Orr, Thompson (D.)
• Assistant Professors Banks, Beck, Brooks, Mungania

The University of Arkansas has been approved by the State Board for Workforce Education for the preparation of teachers, supervisors, and administrators in vocational education. The two areas of con-
centrations in vocational education are: business education (BUED) and family and consumer sciences (FCSE). A third concentration, technology education (TEED), is awaiting final approval from the Arkansas Department of Higher Education Coordinating Board.

Professional Pre-Education Core Requirements in Vocational Education

Curriculum and Instruction
- CIED 1002 Intro. to Education
- CIED 1011 Intro. to Education Practicum
- CIED 3023 Survey of Exceptionalities
- CIED 3033 Classroom Learning Theory

Educational Technology
- ETEC 2001 Educational Technology
- ETEC 2002L Educational Technology Lab

Vocational Education
- VOED 4003 Intro. to Professionalism
- VOED 4013 Presentation Techniques

General Studies Requirements
- The general requirements for all undergraduate programs in the College of Education and Health Professions are found in the undergraduate catalog.
- FSCE must enroll in 4 hours of chemistry that meet university core as well as electives

Technical Studies Requirements
- Technical studies requirements for students majoring in business education and family and consumer science education are listed below.

Professional Education Requirements for Master of Arts in Teaching (M.A.T.)
- See the Graduate School Catalog.

See page 332 for Vocational Education (VOED) Courses.

Business Education (BUED)
Betsy Orr
Adviser
109 Graduate Education Building
479-575-6430
borr@uark.edu

Completion of the Bachelor of Science in Education degree has two concentrations: non-licensure and licensure. Requirements for initial teacher licensure may be met by completing the B.S.E. and the Master of Arts in Teaching (M.A.T.) (See the Graduate School Catalog.) Refer to the college academic regulations, admission process for initial licensure for other requirements.

Business Technology Education Requirements

University Core Requirements (35-38 credit hours) 35-38
- Social Science
- PSYC 2003 General Psychology and ECON 2023 Principles of Microeconomics with "C" or better
- 3 hours must be MATH 2053 - Finite Math 3

BUED General Education Requirements 16-19
- HLSC 1002 Wellness Concepts
- PEAC 1621 Fitness Concepts
- Electives as needed to meet 54 total/credits of general education and university core. 13-16

Pre-Education Core 18
- CIED 1002 Introduction to Education
- CIED 1011 Introduction to Education: Practicum
- CIED 3023 Survey of Exceptionalities
- CIED 3033 Classroom Learning Theory
- VOED 4003 Introduction to Professionalism
- VOED 4013 Presentation Techniques
- ETEC 2001/2002L Educational Technology with "C" or better

Business Education BUED Concentration 52

In addition to the general studies (see note), 7 - 10 credit hours of electives and the 18-hour Professional Pre-Education Core, the following courses are required for a concentration in business education and, upon completion of the Master of Arts in Teaching (M.A.T.) degree, will qualify the graduate for the teaching in the area of Business Technology. Applicants for licensure must also complete Arkansas Department of Education requirements.

Business Technology Education Requirements 33
- WCOB 1012 Legal Environment of Business
- WCOB 1023 Business Foundations
- WCOB 1033 Data Analysis and Interpretation
- WCOB 2013 Markets and Consumers
- WCOB 2023 Production and Delivery of Goods and Services
- ECON 2013 Principles of Macroeconomics
- ISYS 3000-level or above
- VOED 480V Problems in VOED (Word Processing)
- MGMT 3563 Mgmt Concepts/Orgn Behavior, or MKTT 3433 Principles of Marketing
- VOED 380V Supervised Work Experience (6 hours)
- VOED 4122 Leadership Development
- COMM 3703 Organizational Communications
- Business Electives (15 hours)

Total 124 hours

Marketing Technology and Career and Technical Administrator

See adviser for requirements for licensure in Marketing Technology and Career and Technical Administrator.

Business Education Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan in Vocational Education with a concentration in Business Education should see page 42 in the Academic Regulations chapter for university requirements of the program.

Fall Semester 1
- 3 ENGL 1013 Composition I
- 3 †Fine Arts or Humanities
- 3 CIED 1002 Introduction to Education
- 1 CIED 1011 Introduction to Education: Practicum
- 6 Electives (MATH 1203 -If required)
- 15 semester hours

Spring Semester 1
- 3 ENGL 1023 Composition II
- 3 COMM 1313 Fundamentals of Communication
- 3 †PSYC 2003 General Psychology
- 1 PEAC 1621 Fitness Concepts
- 3 ECON 2013 Prin of Macroeconomics
Fall Semester 2
3 MATH 2053 Finite Math
16 semester hours

Spring Semester 2
3 WCOB 1023 Business Foundations
3 WCOB 1033 Data Analysis and Interpretation
3 †Social Science (except PSYC 2003, ECON 2013/2023)
4 †Science with Lab
17 semester hours

Fall Semester 3
3 CIED 3023 Survey of Exceptionalities
3 CIED 3033 Classroom Learning Theory
3 COMM 3703 Organizational Communication
3 ISYS 3000 level or above
3 WCOB 2013 Markets and Consumers
15 semester hours

Spring Semester 3
3 †Fine Arts or Humanities
3 Business Electives
3 WCOB 2023 Production and Delivery of Goods and Services
3 MKTG 3433 Principles of Marketing or MGMT 3563 Mgmt. Concepts/Organizational Behavior
3 VOED 480v Word Processing
15 semester hours

Fall Semester 4
3 VOED 4003 Professionalism
3 VOED 4013 Presentation Techniques
6 Business Electives
3 VOED 380v Supervised Work Experience
15 semester hours

Spring Semester 4
2 VOED 4122 Leadership Development
3 VOED 380v Supervised Work Experience
6 Business Electives
4 Electives
15 semester hours

124 total hours

† Core areas must be completed as outlined in Catalog of Studies, see page 40.

Family and Consumer Sciences Education (FCSE)
Cecelia K. Thompson
Adviser
120 Graduate Education Building
479-575-2581

Students pursuing the Bachelor of Science in Education degree may select the family and consumer sciences education program concentration as a field of specialization in vocational education. Requirements for initial licensure may be met by completion of the B.S.E. and the Master of Arts in Teaching (M.A.T.) See the Graduate School Catalog.

Completion of the B.S.E. and M.A.T. will prepare students to teach family and consumer sciences at the junior high and secondary education level. Completion of the B.S.E. will prepare students to work in professional careers in the Cooperative Extension Service, business, industry, or social services.

In addition to the general studies and the 18-hour Professional Pre-Education Core, the following courses are required for a concentration in family and consumer sciences education.

University Core Requirements

Social Science
PSYC 2003 General Psychology 3

General Education Requirements
HLSC 1002 Wellness Concepts
PEAC 1621 Fitness Concepts

Natural Science
CHEM 1103/1101L Chemistry I or
CHEM 1074/1071L Fundamentals of Chemistry

Pre-Education Core 18
CIED 1002 Introduction to Education
CIED 1011 Introduction to Education: Practicum
CIED 3023 Survey of Exceptionalities
CIED 3033 Classroom Learning Theory
VOED 4003 Introduction to Professionalism
VOED 4013 Teaching Strategies
ETEC 2001 Educational Technology
ETEC 2002L Educational Technology Lab

Technical Requirements 33
HESC 1403 and HESC 2413
(must be taken as part of the general education requirements in social studies.)

Study of the Family
HESC 4453 Parenting and Family Dynamics
HESC 3423 Adolescent Development

Select 2 additional courses:
HESC 3443 Families in Crisis
HESC 4433 Dynamic Family Interaction
SCWK 3233 Juvenile Delinquency
SCWK 4133 Family Preservation
SCWK 4143 Addiction and the Family

Human Development—Select 1 course
HESC 4003/4002L Infant and Toddler Development
HESC 2433 Child Development

Management
HESC 3763L Family Resource Management Lab

Consumer Economics—Select 1 course
HESC 4753 Family Financial Management
FINN 3003 Personal Financial Management

Nutrition and Food
HESC 1213 Nutrition in Health
HESC 2112/2111L Foods I
HESC 2123/2120L Catering Management or HESC 2203 Nutrition for Exercise and Sports

Clothing and Textiles
HESC 1013 Intro. to Clothing Concepts
HESC 2053/2050L Intro. to Textile Science
Family and Consumer Sciences Education Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan in Vocational Education with a concentration in Family and Consumer Sciences Education should see page 42 in the Academic Regulations chapter for university requirements of the program.

Fall Semester 1
3 ENGL 1013 Composition I
3 Math 1203 College Algebra
3 †US History
3 HESC 1403, Lifespan Development
4 †Chemistry with Lab
16 semester hours

Spring Semester 1
3 ENGL 1023 Composition II
4 †Science with Lab
3 †Fine Arts or Humanities
3 HESC 1213 Nutrition
3 HESC 1013 Introduction to Clothing Concepts
16 semester hours

Fall Semester 2
3 HESC 2112/211L Foods I and Foods I Lab
3 †Fine Arts or Humanities
3 PSYC 2003 General Psychology
3 ETEC 2001/2002L Educational Technology and Lab
3 CIED 1011/1002, Introduction to Education and Practicum
15 semester hours

Spring Semester 2
3 ENGL 2003 Advanced Composition (or exempt)
3 HESC 2053 Introduction to Textile Science
3 HESC 2413 Family Relation
2 HLSC 1002 Wellness Concepts
1 PEAC 1621 Fitness Concepts
3 HESC 2203 Nutrition for Exercise and Sports or HESC 2123 Catering Management
15 semester hours

Fall Semester 3
3 HESC 3763L Family Resource Management Laboratory
3 HESC4453 Parenting and Family Dynamics
3 *Technical Requirement
3 CIED 3033 Classroom Learning Theory
3 Elective
15 semester hours

Spring Semester 3
3 HESC 3423 Adolescent Development
3 *Technical Requirement
3 HESC 2402/2401L Infant and Toddler Development or HESC 2433 Child Development
3 VOED 480, Problems in Vocational Education (Housing)
3 Elective
15 semester hours

Fall Semester 4
3 CIED 3023 Survey of Exceptionality
3 VOED 4003 Professionalism
3 VOED 4013 Teaching Strategies
7 Electives
16 semester hours

Spring Semester 4
3 HESC 4753 Family Financial Management or FINN 3003 Personal Financial Management
13 Electives
16 semester hours

124 total hours

† University Core areas must be completed as outlined in Catalog of Studies, see page 40.

*Technical Requirements: Six hours required from among the following:
  HESC 3433 Family in Crisis
  HESC 4433 Dynamic Family Interaction
  SCWK 3233 Juvenile Delinquency
  SCWK 4133 Family Preservation
  SCWK 3483 Addiction and the Family

For professional education requirements for Master of Arts in Teaching (M.A.T.), see the Graduate School Catalog or see page 231 in this catalog.

Human Resource Development (HRDV)

Phil Gerke
Adviser
217 Graduate Education Building
479-575-4690

Dale E. Thompson
Adviser
111 Graduate Education Building
479-575-6640

HRDV curriculum focuses on developing the “people” skills and effective development strategies useful for management, supervision, employee/technical training, consultation, or instructional design. The plan of study is designed to accelerate degree-completion for working adults by offering credit for knowledge gained by experience. Courses are offered by distance learning at selected campuses around Arkansas on a two-year rotation plan in cooperation with the UA Division of Continuing Education. Undergraduates also obtain a solid academic base to pursue a graduate degree. This is not a teacher preparation concentration.

This concentration is open only to adult learners who have earned at least 40 hours of General Education requirements, who are employed full time, and have at least five years of work experience. Departmental approval is mandated before taking any of the required upper-level courses in this concentration. Because of this admission requirement this major is not an option for the Act 1014 eight semester plan. However a recommended 4 semester plan and additional information regarding this program can be found on the College web site.
Human Resource Development (HRDV) Concentration

University Core and HRDV General Education Requirements
PSYC 2003 General Psychology 3

HRDV General Studies Requirements
Oral Communication: Fundamentals or public speaking 3
Health/Wellness/Fitness/Safety 3
Computers/Media: application software courses, or exempted with documented proficiency 3
Electives or as needed to total 55 hours/credits of general education 8

HRDV Technical Requirements
Required Course: VAED 3403 Employment Law in Human Resource Development.
The remaining 30 hours of HRD technical requirements may be satisfied in a variety of ways. Appropriate occupation-related credits from UA coursework, transfers from accredited institutions of higher learning (within limits), or from College Level Examination Program (CLEP) exams may be applied. Credit for work experience and experiential learning may be applied to HRD technical requirements. VOED 200V-204V credit is earned through selected National Occupational Competency Testing Institute (NOCTI) assessments. After completing VAED 3503 Workforce Behavior course, credit may be earned through VAED 450V Portfolio Development for documented experiential or occupational learning based on a standardized format as suggested by the Council for the Advancement of Experiential Learning (CAEL). Credit for certain occupational training or professional certifications may also be earned using the American Council on Education (ACE) guidelines. After the initial 12-hour HRDV Internship requirement has been met, up to 12 additional credits of ITED 459V may also be applied to HRDV Technical requirements.

HRDV Professional Courses: taught in a two-year rotation of weekend and Web-based distance learning classes VAED 3113, VAED 3123, VAED 3133, VAED 3213, VAED 4113, VAED 4133, VAED 4213, VAED 4233

HRDV Internship Requirements
ITED 459V, HRDV Internship: practical application of HRD theory and concepts in the workplace 12

Total 124

Industrial and Technical Education (ITED)

NOTE: The Industrial and Technical Education (ITED) concentration is being phased out and is no longer accepting new students. A Technology Education (TEED) concentration will be accepting students upon final approval by the Arkansas Higher Education Coordinating Board. Contact the adviser below for further information. The Technology Education (TEED) concentration will prepare graduates to teach technology education at the junior high and secondary education level. The program of study was developed to correspond to the national Standards for Technological Literacy, National Council for the Accreditation of Teacher Education (NCATE) standards, and applicable Arkansas Curriculum Frameworks.

Michael K. Daugherty
Technology Education Adviser
107 Graduate Education Building
479-575-5119

Performance-Based Teacher Education (PBTE) Concentration

This concentration should be selected by incumbent (in-service) trade and technical instructors who desire to obtain a Bachelor of Science in Education degree or become certified as a master instructor in the post-secondary vocational and secondary school systems. PBTE concentration utilizes the Performance-Based Teacher Education modules and is field-based.

Residency Requirement for PBTE Concentration

The residency requirement for the PBTE concentration specifies that at least six semester hours of course work must be completed on campus, with an additional six semester hours taken at a location in the state taught by University of Arkansas faculty.

SEE PAGE 331 FOR VOCATIONAL AND ADULT EDUCATION (VAED) COURSES
### Mission and Objectives

Engineering is one of the most rewarding of the major professions. Engineers have been primarily responsible for the present high standard of living and for the security of the nation in times of peace and war. Engineering graduates must have a background of sound mathematics, scientific and economic principles and must be acquainted with industrial practices in their chosen field before they can assume responsibility in the profession. Many engineering graduates become managers and leaders in the public and private sectors because of the problem-solving skills that were developed as part of an engineering education.

The College of Engineering adds personal, social and economic value to the region, the state, the nation, and to the world through engineering education and cutting-edge research in emerging technologies. Value is added through four separate but highly integrated activities:

- Undergraduate Education
- Graduate Education and Research
- Continuing Education and Technology Transfer
- Technology-based Business Incubation and Job Creation

Programmatic activities focus largely on the following areas of emphasis:

- Biological, Chemical and Food Processing
- Biomedical Engineering
- Database and Telecommunications
- Electronics Manufacturing
- Environmental and Ecosystems Analysis
- Nanotechnologies
- Transportation, Logistics and Infrastructure
- Homeland Security

Extensive information about the College of Engineering is available from the Web site http://www.engr.uark.edu. The site includes overviews of each programmatic activity and area of emphasis as well as information about faculty, facilities, programs of study, advisory groups, centers, research capabilities, special programs, distance education, professional development, and opportunities for partnerships with the college.

### Statement of Purpose

Recognizing that the University of Arkansas, Fayetteville, is a land-grant institution with consequent responsibilities in teaching, research, and service, and realizing that these are mutually dependent and necessary responsibilities, the College of Engineering adopts and seeks to fulfill the following statements of purpose.

**Undergraduate Education:** To offer a high-quality and fully accredited course of instruction involving classroom, laboratory, and extracurricular activities that will result in professionals qualified
to begin careers in the field of engineering and prepared to assume responsible places of leadership in society.

**Graduate Education:** To offer state-of-the-art coursework and research experiences that result in all graduates being capable of independent analysis and design, and all Ph.D. graduates capable of extending the state-of-the-art in their areas of expertise.

**Continuing Education:** To provide local, regional, national, and international seminars, symposia, short courses, and credit courses to engineers and others in the technical community to help them further their formal education and keep abreast of new developments in technology.

**Technology Development:** To assist actively and vigorously in the growth and development of the state of Arkansas and the nation by performing research and development of state-of-the-art technology, by updating the existing technology within industrial circles, by providing educational support services, and by attracting and creating new industry.

**External Relations:** To communicate effectively with the college's various constituencies to establish and maintain long-term relationships, which lead to increased support for quality programs in teaching, research, and service.

**Internal Relations:** To actively involve engineering faculty in University, college, and department governance and related functions.

**COLLEGE OF ENGINEERING STRATEGIC PLAN**

“Engineering the Future – Today”

For more than 100 years, the College of Engineering has successfully fulfilled its primary mission: to provide an excellent engineering education to undergraduate and graduate students at the University of Arkansas.

The College of Engineering faculty, staff, alumni and students decided to accept the challenge to become one of the best. Specifically, our collective goal is:

To become and be perceived as one of the top tier graduate and undergraduate engineering programs in the U.S.

The College’s strategic plan encompasses six main goals. By successfully accomplishing these objectives, the College of Engineering will contribute to the University of Arkansas becoming a nationally-competitive, student-centered research institution serving Arkansas and the world, effectively fulfilling its purpose.

**Six Strategic Goals**

1. **Implementing the Student-Centered Educational Experience**
   - Provide a student-centered educational experience that attracts diverse, high-quality students, enables them to realize their potential, inspires them to pursue excellence at all degree levels and grooms them to become leaders in their profession.

2. **Implementing an Enabling Research Environment**
   - Create a research environment that enables, enhances and recognizes scholarship, while stimulating entrepreneurship and economic development within our state, nation and world.

3. **Implementing the Vision as it Relates to Faculty**
   - Recruit, mentor and retain high-quality and diverse faculty members who value and promote world-class scholarship.

4. **Implementing the Vision as it Relates to Staff**
   - Attract, develop and retain well-qualified, diverse and skilled staff members who are equipped to support the growth and potential of the College of Engineering.

5. **Implementing the Service and Outreach Plan**
   - Enhance the impact of the College of Engineering both within and outside the university through service and outreach.

6. **Implementing the Economic Development Plan**
   - Become a catalyst for economic development to achieve the long-term economic goals of Arkansas through entrepreneurship, research and collaboration with industry and government.

**FACILITIES AND RESOURCES**

**Instructional, Computer, and Laboratory Facilities**

Undergraduate instruction in engineering takes place in Bell Engineering Center, Engineering Hall, and the Mechanical Engineering building. These facilities contain state-of-the-art classrooms and instructional equipment. Undergraduate laboratories are located both on the main campus as well as at the Engineering Research Center. Laboratories offer students hands-on experience relating to the subject matter addressed in the classroom.

The College of Engineering utilizes a wide variety of computing equipment to assist in engineering education. Students have easy access to computers through general computer laboratories or computer facilities located in specialized laboratories within the college. The computers are networked so that all the computing power of the university, including the mainframe computers, can be accessed from the PCs or workstations provided for engineering students. Owning a personal computer is not required; however, it is beneficial.

**Library**

The books and references used by engineering students and faculty are housed principally in the University of Arkansas Mullins Library. This collection is the most useful and comprehensive engineering library in the state. Many publications pertinent to the engineering profession are being added continuously. Mullins Library is the depository for water resources papers, geological survey materials, and NASA publications, as well as other governmental and industrial series.

**Engineering Research Center**

The 178,000-square-foot Engineering Research Center is located approximately two miles south of the main campus. The center provides the facilities and support services for a wide variety of research activities. It houses the Engineering Experiment Station through which the research of individual departments in the college is administered. Centers and laboratories located at the Engineering Research Center include GENESIS, the High Density Electronics Center, the Center for Training Transportation Professionals, and the Chemical Hazards Research Center.

**Distance Learning**

A Master of Science in Engineering (M.S.E.) degree is available for students who wish to take a broad range of engineering courses. See the Graduate School Catalog for details.

Professional development and continuing education credits can be earned through the College of Engineering’s Center for Distance Learning. These courses provide ongoing training on technical and engineering topics for professional engineers, land surveyors, and others in the technical and engineering professions.

The Master of Science in Operations Management (MSOM) degree program at the University of Arkansas offers students the philosophy,
Cooperative Education

The Cooperative Education (Co-op) Program provides a unique opportunity for an engineering student to complement on-campus engineering education with professional practice in industry. A participant begins sometime after the freshman year by alternating periods on campus as a full-time student with periods off campus in industry doing engineering work with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers. Depending on the individual situation, three to five work assignments may be meshed with appropriate guidance and supervision from practicing engineers.

During each work period, the student registers for one hour of cooperative education, listed under General Engineering. These hours may be used to satisfy any free elective hours in the curricula. In some cases, with the consent of the department head, a student may use an advanced course to satisfy a technical elective hour.

Normally, a student is eligible to participate in the Co-op Program after completing one year of appropriate engineering study or specific entry-level course work in the chosen area of study with a minimum cumulative grade-point average of 2.25.

Three-Two Transfer Plan

The College of Engineering recognizes that a graduate engineer, to be of full service to community, must be educated in the social sciences and humanities as well as in technical subjects. The practice of industry to elevate engineers to managerial and administrative positions elevates the desirability of a broad educational background. Likewise, most universities within Arkansas do not offer a degree in engineering. Accordingly, the College of Engineering of the University of Arkansas has entered into a cooperative program with several Arkansas "partner" universities to provide for a five-year combined course of study that leads to a Bachelor of Arts/Bachelor of Science degree from the partner university and an engineering degree from the University of Arkansas. Typically, a student spends the first three years at the partner university and then completes an engineering curriculum in two years at the University of Arkansas. The student is awarded the Bachelor of Arts/Bachelor of Science degree by the partner university. The student is awarded the Bachelor of Science in an engineering discipline by the University of Arkansas.

College Admission Requirements

Freshmen admitted to the University of Arkansas, Fayetteville, are eligible to enroll in the College of Engineering.

The freshman curriculum stresses a basic foundation in mathematics, physics, and chemistry, which will be required in later years. The sophomore, junior, and senior years are spent in a strong concentration on the student's chosen field, with emphasis on industrial applications of classroom and laboratory work. By the selection of electives, a student can concentrate in depth in a particular subject, have the flexibility to study several subjects, and minor in an area of interest. Provision is made for electives in the humanities and social sciences as a means of providing a well-rounded education.

Computer Skills

Future students are strongly encouraged to take a one-year high school course in basic computer skills, which should include at a minimum: 1) basic use of a common operating system, 2) word processing, and 3) use of spreadsheets. All engineering departments either recommend or require that incoming students缺陷 in these skills take a specified remedial course. Taking high school courses in engineering drawing and computer programming also is beneficial and strongly encouraged.

International Students

Before being admitted all electrical engineering and computer engineering applicants must submit a Test of Spoken English (TSE) score of at least 5.0, or a 7.0 on the spoken section of the IELTS, and an ACT score of 25 (or SAT score of 1140(R)) or above, to be eligible for admission.

Transfer of Credit

In addition to the University policies controlling the granting of credit for course work taken at other institutions, the following policies apply to students entering the College of Engineering.

1. All courses taken at another institution are subject to approval by the dean of the College of Engineering and the head of the degree-granting department. Credit from all institutions must be approved on a course-by-course basis to ensure its acceptability in fulfilling requirements for a degree in engineering. In making this evaluation, the student may be required by the dean and/or department head to produce catalogs from the institution from which the student is transferring that contain descriptions of the courses for which credit is expected in an engineering discipline.

2. Approval of credit at another institution is not granted for courses that are substantially similar to courses that are being offered at the University of Arkansas.

3. A student must have the approval of the dean of the College of Engineering before any courses are taken at another institution for credit at the University of Arkansas.

4. The 256
2. Advanced (3000- and 4000-level at the University of Arkansas) engineering courses may not normally be transferred from institutions that do not have engineering programs accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

3. Unless exceptions are granted at the time of admission to the University of Arkansas, no degree credit will be granted for any course taken at another institution in which the student’s grade in that course was not the equivalent of at least 2.00 on a 4.00 grading system. See the Admission chapter in this catalog for more information.

COLLEGE SCHOLARSHIPS

The College of Engineering awards numerous scholarships and fellowships to entering freshmen, continuing students, transfer students, and graduate students. Most scholarships are based primarily on academic performance. However, scholarships also may be awarded on the basis of financial need and diversity. Scholarships are available from both the college and its individual departments.

College scholarships are available to any engineering student, and departmental scholarships are meant for students enrolled in a particular discipline of engineering. Students must be admitted to the University of Arkansas and accepted into the College of Engineering to qualify and receive either a college or departmental scholarship. The college has a one-step application process that allows a student to be considered for all college-level and departmental scholarships.

For more information concerning scholarship and diversity opportunities, contact the Engineering Student Affairs Office at 575-3051 or e-mail tic@engr.uark.edu.

STUDENT ORGANIZATIONS

The following are honorary-scholarship and professional societies to which engineering students at the University of Arkansas may aspire:

• Alpha Chi Sigma (a professional chemistry fraternity)
• Alpha Epsilon (Biological/Agricultural Engineering)
• Alpha Pi Mu (Industrial Engineering)
• Chi Epsilon (Civil Engineering)
• Eta Kappa Nu (Electrical Engineering)
• Omega Chi Epsilon (Chemical Engineering)
• Order of the Engineer (professional engineering society)
• Phi Eta Sigma (freshmen)
• Phi Kappa Phi (juniors and seniors)
• Phi Sigma Rho (professional engineering sorority)
• Pi Mu Epsilon (Mathematics)
• Pi Tau Sigma (Mechanical Engineering)
• Tau Beta Pi (Engineering)
• Theta Tau, (a professional engineering fraternity, maintains a chapter house on the campus and is active in university and college affairs)

Several national engineering societies are listed below and maintain student branches in the College of Engineering, each under the auspices of a professor in a related department.

• American Chemical Society
• American Nuclear Society
• Amateur Radio Club of the University of Arkansas
• American Society of Agricultural and Biological Engineers
• American Society of Civil Engineers
• American Society of Heating, Refrigeration, and Air-Conditioning
• American Society of Mechanical Engineers
• Institute of Biological Engineers

• Institute of Chemical Engineers
• Institute of Electrical and Electronics Engineers
• Institute of Electrical and Electronics Engineers, Components, Packaging, and Manufacturing Technology
• Institute of Industrial Engineers
• Institute of Transportation Engineers
• International Microelectronics and Packaging Society
• National Society of Black Engineers
• Society of American Military Engineers
• Society of Automotive Engineers Assoc. for Computing Machinery
• Society of Hispanic Professional Engineers
• Society of Manufacturing Engineers
• Society of Women in Engineering
• Transportation and Logistics Association

COLLEGE ACADEMIC REGULATIONS

Students are expected to keep themselves informed concerning current regulations, policies, and program requirements in their fields of study and must meet all requirements of the degree programs in which they are enrolled. Courses that are modified or added to a curriculum and that are incorporated into the curriculum at a level beyond that at which a student is enrolled may become graduation requirements for that student. Courses that are incorporated into the curriculum at a level lower than the one at which the student is enrolled are not required for that student.

Eligibility

Only students enrolled in the College of Engineering or enrolled in programs in which curricula require engineering courses will be allowed to take engineering courses. Exceptions to this requirement must be approved by the dean of engineering. This does not apply to graduate students.

College Policy on Academic Ethics

The purpose of this policy statement is to define and encourage a uniform application of rules and regulations regarding academic ethics throughout the College of Engineering. Unethical conduct undermines the pursuit of the educational goals of this institution and erodes the honor, ability, and reputation of its graduates. This policy is intended to promote an academic climate wherein the full potential of each student can be realized and recognized.

Code of Ethics

Students in the College of Engineering are obligated to comply with pertinent provisions of the Code of Ethics applicable to professional practice following graduation. The Code requires “honesty, impartiality, fairness, and equity,” and “adherence to the highest principles of ethical conduct.” Most particularly, it states that engineers shall:

1. Be objective and truthful in professional reports, statements, or testimony;
2. Not falsify or permit misrepresentation of their academic or professional qualifications;
3. Give credit for engineering work to those whom credit is due;
4. Not compete unfairly with other engineers by attempting to obtain employment or advancement by improper or questionable methods;
5. Avoid any act tending to promote their own interest at the expense of the dignity and integrity of the profession.
Examples of Unethical Conduct

Pursuant to these provisions, the faculty of the College of Engineering considers the following to be specific examples of unethical conduct:

- Submission, as one’s own, of any work prepared totally or in part by someone else.
- Plagiarism, i.e., the unacknowledged incorporation of another person’s work, either verbatim or in substance, in work submitted for credit.
- Unauthorized collaboration with another person in preparing work submitted for credit.
- Unauthorized submission, for credit, of work previously credited in another course.
- Unauthorized alteration of work submitted for re-grading.
- The use of unauthorized materials or aids during examinations.
- Copying from the examination paper of another student or giving aid to, or seeking aid from, another student during an examination.
- Using, obtaining, or attempting to obtain by any means the whole or any part of an examination not yet administered, or of information pertaining thereto.
- Taking, or attempting to take, an examination for another student, or allowing another student to take or attempt to take an examination for oneself.
- Any conduct expressly stated to be unethical by the instructor in a particular course.
- Aiding, abetting, or condoning unethical conduct on the part of another student.

Strict adherence to the foregoing Code of Ethics is a requirement for graduation from the College of Engineering.

Faculty Response to Acts of Unethical Conduct

Upon becoming aware of unethical conduct, the faculty member should:

1. Collect and/or prepare appropriate documentation of the act. Examples of suitable documents are (a) reproduced copies of examinations, papers, or reports that establish unethical conduct; (b) signed written statements regarding unethical conduct by another student. (This means may be used by students to initiate action in cases of unethical conduct.)

2. Inform the student of any action to be taken in response to unethical conduct. Possible actions include (a) reduction of grade; the faculty member may reduce the grade on a particular test or assignment or assign a failing grade for the course; (b) request the College of Engineering Academic Ethics Board to rule that the student does not meet the requirements for graduation.

3. Submit a report to the College of Engineering Academic Ethics Board and give a copy of the report to the student(s) involved. Copies of documentation should accompany the report submitted to the board. (The report will provide protection against repeated offenses in different courses.)

Academic Ethics Board

The purpose of the Academic Ethics Board is to review the academic ethics reports submitted by faculty members and any record of previous infractions. When the circumstances warrant, the board can, by a two-thirds vote, rule that the student does not meet the requirements for graduation from the college as set forth in the engineering catalog. (The board can specify conditions under which the requirements might still be met.)

The board shall be made up of seven tenured engineering faculty members and two students. The faculty members in each department of the College of Engineering shall elect one person from the faculty in their department to serve on the board. Each board member shall serve a two-year term. The Dean will appoint the student members to serve staggered two-year terms.

Appeals

A student who wishes to appeal a decision by a faculty member or by the College of Engineering Academic Ethics Board may utilize existing university academic grievance procedures.

HONORS PROGRAM

The College of Engineering has established an honors program to challenge superior students with a more in-depth academic program and research experience and to provide a structure for working more closely with faculty members and other students in a team environment. An honors program is highly recommended for individuals planning academic or research related careers that require considerable critical and original independent thinking. Admission requirements for the college’s Honors Program are as follows: entering freshmen must have at least a 3.5 high school GPA and at least 28 composite score on the ACT; entering transfer students must have a 3.25 GPA on their transfer work. Students not qualifying for the Engineering Honors Program initially are eligible after one year if they earn at least a 3.25 GPA.

Students must formally apply for admission to the Engineering Honors Program. Once accepted into the program, Honors students take a minimum of 12 hours of Honors courses (a minimum of 6 of these 12 hours must be in engineering), participate in undergraduate research and write an undergraduate thesis, and must fulfill any additional departmental requirements. To retain status in the Honors Program, a student must maintain a minimum cumulative GPA (for all course work, computed at the end of the spring semester) of 3.25. To receive honors distinction at graduation, a student must hold a cumulative GPA of 3.50 or better (for all course work, computed at graduation). Students with a GPA between 3.25 and 3.50 do not receive honors distinction at graduation.

DEGREE REQUIREMENTS

The basic requirement for a Bachelor of Science degree in engineering is 124-136 semester hours of academic work, depending on the career field chosen. Students coming from high school with adequate preparation will be able to satisfy this requirement in eight semesters; however, some students require preparatory courses, and others choose to enroll in slightly lighter loads and graduate in nine or 10 semesters. Students enrolled in ROTC require an additional 19 semester hours to meet all graduation requirements and graduate in 10 semesters (five years).

Engineering is a rapidly changing profession, and the departmental curricula are updated continuously to keep pace with these changes. Students entering under this catalog will be required to comply with such curriculum changes to earn their degree. However, the total number of semester hours required for the degree may not be increased, and all work completed in accordance with this catalog prior to the curriculum change will be applied toward the student’s degree requirements. Former students of the college must meet the curriculum requirements in effect at the time of their readmission.

Graduation Requirements

In addition to the specific departmental requirements for degree plans, students should refer to the Academic Regulations chapter of this catalog for general university requirements, beginning on page 39. A portion of that information is listed here for convenience.
1. Arkansas Assessment of General Education (AAGE) or Rising Junior Exam
All undergraduates in Arkansas public institutions who have earned at least 45 hours of credit toward a degree are required to take the Arkansas Assessment of General Education Exam (AAGE), also known as the Rising Junior Exam.

2. Residency Requirement
The full senior year must be completed in residence except that a senior who has already met the minimum residency requirement will be permitted to earn not more than 12 of the last 30 hours in extension or correspondence courses or in residence at another accredited institution granting the baccalaureate degree. No more than six of these 12 hours may be correspondence courses. The minimum residence requirement is 36 weeks and 30 semester hours. Residency for the senior year is defined as a period during which the student must be enrolled in courses offered on the campus in Fayetteville. This is intended to provide adequate contact with the University and its faculty for each student who is awarded a degree. Colleges and departments have the authority to prescribe residence requirements that exceed those described here.

3. Grade-Point Average
A candidate for a degree from the College of Engineering must have earned a grade-point average of no less than 2.00 on all courses in the student’s major area of study, all engineering courses, and all work completed at the university and presented for the degree. Grades on work taken at other colleges and presented for transfer credit must also meet this standard.

4. Courses That Do Not Count Toward a Degree
The following courses do not count toward degree credit: ANTH 0003, PHSC 0003, ENGL 0003, MATH 0003, CIED 0003, MATH 1203, MATH 1213, MATH 1285, and ENGL 2003.

5. “D” Rule
No student will be allowed to graduate if the student has “D” grades in more than 15 percent of all credit earned in this institution and presented to meet the requirements for a degree.

6. 68 Hour Rule
Students who transfer into the University may present for degree credit no more than 68 hours of lower division course work (1000 and 2000 level).

7. Advanced Composition
Every undergraduate student is required to take and pass ENGL 2003 Advanced Composition unless exemption can be gained. ENGL 2003 will not count as part of the total number of hours required for a degree in the College of Engineering.

8. University Core (State Minimum Core)
The University of Arkansas has adopted a University Core of 35 semester-credit-hours of general education courses that are required of all baccalaureate degree candidates. This is in compliance with Arkansas Act 98 of 1989 and the subsequent action of the Arkansas State Board of Higher Education. Beginning in the fall semester of 1991, all state institutions of higher education in Arkansas have a 35-hour minimum core requirement with specified hours in each of six academic areas. The University and the College of Engineering have identified those courses that meet the minimum requirement, and they are listed in the chart below.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts, Humanities and Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Science</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>9</td>
</tr>
</tbody>
</table>

Students should consult the requirements for specific departments and programs when choosing courses for use in the UA University Core.

Every student in the College of Engineering is required to complete a minimum of 18 semester hours in the humanities and social sciences. Six semester hours must be at the 3000-level or above. A list of approved upper-level humanities/social science courses is available in departmental offices and the dean’s office.

No more than nine semester hours from any single discipline may be presented for degree credit. To meet the University Core requirements, the total number of hours (both upper level and lower level) in the fine arts/humanities courses must be at least six, and the social science hours must total at least nine (in addition to the U.S. history or government requirement). The six hours of courses at the 3000 and 4000 level may be in the fine arts and humanities area, the social science area, or divided between the two areas. Since some of the humanities and social science courses are specified in some of the curricula, e.g., ECON 2143 in chemical and mechanical engineering, the student should consult the curriculum of the department in which he/she is enrolled prior to selecting upper-level electives.

**Specific University Core Requirements for Engineering Students**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1013 Composition I</td>
<td></td>
</tr>
<tr>
<td>ENGL 1023 Technical Composition II</td>
<td></td>
</tr>
<tr>
<td>(ENGL 1023 Composition II may be taken in lieu of Technical Composition II)</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2554 Calculus I</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 2054 University Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 2074 University Physics II</td>
<td></td>
</tr>
<tr>
<td>U.S. History or Government</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2003 History of Amer. People or Government to 1877</td>
<td></td>
</tr>
<tr>
<td>HIST 2013 History of Amer. People 1877 to Present</td>
<td></td>
</tr>
<tr>
<td>PLSC 2003 American National Government</td>
<td></td>
</tr>
<tr>
<td>Fine Arts, Humanities and Social Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Fine Arts and Humanities</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Six hours of Fine Arts, Humanities and Social Sciences must be upper level courses (3000-4000 level).</td>
<td></td>
</tr>
</tbody>
</table>

A list of approved courses is available in departmental office.

**Minors in Other Colleges and Schools**

Students in the College of Engineering may pursue an academic minor in other colleges. For example, a minor in business is popular among engineering students. For requirements regarding minors, check the catalog listing for the department offering the minor. Students must notify the College of Engineering dean’s office of their intent to pursue a minor.

**Requirements to Graduate with Honors**

Students who have demonstrated exceptional academic performance in baccalaureate degree programs will be recognized at graduation by the honors designation of cum laude, magna cum laude, or summa cum laude. To earn this designation, the student must meet the following criteria:

1. Must have completed at least one-half of his or her degree work at the University of Arkansas;
2. Must have at least a 3.50 GPA on University of Arkansas course work, computed at graduation (students with grade-point averages
lower than 3.50 do not receive honors designation at graduation);  
3. Must successfully complete the Engineering Honors Program,  
which includes a minimum of 12 hours of honors courses (at least  
6 of these hours in engineering), an undergraduate research expe-
rience and thesis, and any additional departmental requirements;  
4. Research and thesis material shall be evaluated by each department;  
5. For cum laude, the student must achieve a GPA of 3.50 or  
higher and have good or better performance on the undergrada-
te research and thesis;  
6. For magna cum laude, the student must achieve a GPA of 3.75  
or higher and have good or better performance on the under-
graduate research and thesis;  
7. For summa cum laude, the student must achieve a GPA of 3.90  
or higher and have outstanding performance on the undergrada-
te research and thesis.  
The criteria may be evaluated and changed periodically by the  
College of Engineering.

Requirements to Graduate with Distinction

Students who have not completed the Engineering Honors  
Program but have demonstrated excellent academic performance  
in baccalaureate degree programs will be recognized at graduation  
by the designation of “with distinction,” “with high distinction,” or  
“with highest distinction.” To earn these designations, the student  
must meet the following criteria on his or her University of Arkansas  
course work:

1. Must have completed at least one-half of his or her degree work  
at the University of Arkansas;
2. For “with distinction,” the student must achieve a GPA of 3.60  
or higher;
3. For “with high distinction,” the student must achieve a GPA of  
3.75 or higher;
4. For “with highest distinction,” the student must achieve a GPA  
of 3.90 or higher.

The criteria may be evaluated and changed periodically by the  
College of Engineering.

GRADUATE STUDIES

The College of Engineering, in cooperation with the UA Graduate  
School, offers programs leading to the following graduate degrees:

Master of Science in Biological Engineering (M.S.B.E.)  
Master of Science in Biomedical Engineering (M.S.B.M.E.)  
Master of Science in Chemical Engineering (M.S.Ch.E.)  
Master of Science in Civil Engineering (M.S.C.E.)  
Master of Science in Computer Engineering (M.S.Cmp.E.)  
Master of Science in Computer Science (M.S.)  
Master of Science in Electrical Engineering (M.S.E.E.)  
Master of Science in Environmental Engineering (M.S.En.E.)  
Master of Science in Industrial Engineering (M.S.I.E.)  
Master of Science in Mechanical Engineering (M.S.M.E.)  
Master of Science in Operations Management (M.S.)  
Master of Science in Operations Research (M.S.O.R.)  
Master of Science in Telecommunications Engineering (M.S.Tc.E.)  
Master of Science in Transportation Engineering (M.S.T.E.)  
Doctor of Philosophy in Computer Science (Ph.D.)  
Doctor of Philosophy in Engineering (Ph.D.)

In addition, the College of Engineering supports the following  
interdisciplinary graduate programs:

Master of Science in Cellular and Molecular Biology (M.S.)  
Master of Science in Microelectronic-Photonics (M.S.)  
Master of Science in Space and Planetary Sciences (M.S.)  
Doctor of Philosophy in Cellular and Molecular Biology (Ph.D.)  
Doctor of Philosophy in Microelectronic-Photonics (Ph.D.)  
Doctor of Philosophy in Space and Planetary Sciences (Ph.D.)

Further information concerning these programs may be found  
in the Graduate School Catalog or in the office of the dean of the  
Graduate School.

ACCREDITATIONS

As the only comprehensive engineering program in Arkansas, the  
College of Engineering offers undergraduate, graduate, and doctoral  
degrees through seven academic departments. UA engineering pro-
grams have been continuously accredited by the Accreditation Board  
of Engineering and Technology (ABET) since 1936.

The College of Engineering offers the following programs accred-
ited by the Engineering Accreditation Commission of ABET, 111  
Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone  
(410) 347-7700.

• Bachelor of Science in Biological Engineering (B.S.B.E.)  
• Bachelor of Science in Chemical Engineering (B.S.Ch.E.)  
• Bachelor of Science in Civil Engineering (B.S.C.E.)  
• Bachelor of Science in Computer Engineering (B.S.Cmp.E.)  
• Bachelor of Science in Electrical Engineering (B.S.E.E.)  
• Bachelor of Science in Industrial Engineering (B.S.I.E.)  
• Bachelor of Science in Mechanical Engineering (B.S.M.E.)  
• Bachelor of Science in Environmental Engineering (M.S.En.E)  
• Bachelor of Science in Transportation Engineering (M.S.T.E)

Departmental Majors

BIOLOGICAL AND AGRICULTURAL  
ENGINEERING (BAEG)

Lalit Verma  
Head of the Department  
203 Engineering Hall  
479-575-2351

• Professors Gardisser, Griffis, Li, Loewer, VanDevender, Verma  
• Associate Professors Carrier, Chaubey, Costello, Huitink, Matlock,  
  Tacker  
• Assistant Professors Bajwa,  Kavdia, Kim, Osborn, Ye  
• Adjunct Professor Ang, Clausen, Deaton, Ingels  
• Adjunct Associate Professors Beitle, Yang  
• Adjunct Assistant Professors Haggard, Howell, Shafrstein, Wimberly

Biological Engineers improve people’s lives today and help assure  
a sustainable quality of life for tomorrow. They create solutions to  
problems by coupling living systems (human, plant, animal, envi-
ronmental, food, and microbial) with the tools of engineering and  
biochemistry. Biological engineers improve human health through  
biomedical engineering; ensure a safe, nutritious food supply and  
create critical, new medicines through biotechnology engineering;  
secure a healthy and safe environment through ecological engineer-
ning. A bachelor of science degree in biological engineering is also  
overall excellent preparation for medical school.

Biological Engineering is an ABET accredited program lead-
ing to the B.S. degree. M.S. and Ph.D. degrees are also offered.  
The curriculum is under the joint supervision of the dean of the  
College of Engineering and the dean of the Dale Bumpers College  
of Agricultural, Food and Life Sciences. The Bachelor of Science  
in Biological Engineering degree is conferred by the College of  
Engineering and is granted after the successful completion of 129  
hours of approved course work.
The educational objectives of the Biological Engineering program are to produce graduates who 1) effectively apply engineering to biological systems and processes (plant, animal, human, microbial, and ecosystem) with demonstrated proficiency in basic professional and personal skills, and 2) are well prepared for future challenges in biological engineering, life-long learning, and professional and ethical contributions to society through sustained accomplishments.

Areas of Concentration

The three areas of concentration in biological engineering are as follows:

- **Biomedical Engineering** – nanomedicine, tissue engineering, organ regeneration and its clinical application, bioinstrumentation, biosensing/medical imaging, medical electronics, physiological modeling, biomechanics, and rehabilitation engineering. This area is excellent preparation for medical, veterinary or dental school as well as for graduate programs in biomedical engineering.

- **Biotechnology Engineering** – biotechnology at the micro- and nano-scale, food processing, food safety and security, developing new products from biomaterials, and biotransformation to synthesize industrial and pharmaceutical products.

- **Ecological Engineering** – integrates ecological principles into the design of sustainable systems to treat, remediate, and prevent pollution to the environment. Applications include stream restoration, watershed management, water and wastewater treatment design, ecological services management, urban greenway design and enclosed ecosystem design.

Each student is required to complete 15 semester hours of approved electives in his or her area of concentration. Six hours must be from the biological engineering design elective courses (listed below) from a single area of concentration. The remaining nine hours are classified as technical electives and consist mainly of upper-division courses in engineering, mathematics, and the sciences as approved by the student’s adviser. The selected technical electives must include at least three hours of upper-level engineering courses, either within BENG or from other engineering departments. The department maintains a list of approved electives.

The areas of technical concentration and the recommended elective courses for each are listed here.

**Biomedical Engineering**

**Design Electives:**
- BENG 3213 Biomedical Engineering: Emerging Methods and Applications
- BENG 4203 Biomedical Engineering Principles

**Technical Electives:**
- BIOL 2533/2531L Cell Biology
- CHEM 3613 Organic Chemistry II
- CHEM 3611L Organic Chemistry II Lab
- BIOL 2404 Comparative Vertebrate Morphology, or BIOL 2443/2441L Human Anatomy
- BIOL 4234 Comparative Physiology, or BIOL 2213/2211L Human Physiology
- BENG 4113 Risk Analysis for Biological Systems
- BENG 4123 Biosensors and Bioinstrumentation
- BENG 4623 Biological Reactor Systems Design
- BENG 451VH Honors Thesis
- BIOL 4233 Microbial Genetics
- KINS 3353 Mechanics of Human Movement
- ELEG 2903 Digital Systems
- HESC 3204 Nutrition

**Biotechnology Engineering**

**Design Electives:**
- BENG 4703 Biotechnology Engineering
- BENG 4623 Biological Reactor Systems Design

**Technical Electives:**
- BENG 4113 Risk Analysis for Biological Systems
- BENG 4123 Biosensors and Bioinstrumentation
- BENG 451VH Honors Thesis
- FDSC 4304 Food Chemistry
- FDSC 4124 Food Microbiology
- FDSC 3103 Principles of Food Proc.
- BIOL 4233 Microbial Genetics
- BIOL 4313 Physiology of Microorganisms
- CHEM 3453/3451L Elements of Physical Chemistry
- MEEG 4413 Heat Transfer
- CHEG 3153 Non-equilibrium Mass Transfer
- CHEG 4423 Auto. Process Control
- HESC 3204 Nutrition

**Ecological Engineering**

**Design Electives:**
- BENG 4903 Ecological Engineering Principles
- BENG 4923 Ecological Engineering Design

**Technical Electives:**
- BENG 4113 Risk Analysis for Biological Systems
- BENG 4403 Enclosed Ecosystems Design
- BENG 4623 Biological Reactor Systems Design
- BENG 4803 Precision Agriculture
- BENG 4123 Digital Remote Sensing and GIS
- BENG 451VH, Honors Thesis
- BIOL 3863/3861L General Ecology
- CVEG 3243 Environmental Engineering
- CVEG 4243 Environmental Engineering Design
- CSES 2203 Soil Science
- CSES 4043 Environmental Impact and Fate of Pesticides
- GEOG 4543 Geographic Information Systems
- ENSC 4034 Analysis of Environmental Contaminants

**Biological Engineering Eight-Semester Degree Program**

The following section contains the list of courses required for the Bachelor of Science in Biological Engineering degree and a suggested sequence. Some courses are not offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Pre-Medical students must take CHEM 3603/3601L, Organic Chemistry I, and CHEM 3613/3611L, Organic Chemistry II, instead of CHEM 2613/2611L, Organic Physiological Chemistry. This requires special scheduling of courses beginning in the first sophomore semester. See your faculty adviser for this schedule plan.

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

**Students who have earned 45 hours must take the Rising Junior Exam.**

Students must also take ENGL 2023 during the third year or gain exemption.

**Fall Semester 1**
- 3 GNEG 1103 Introduction to Engineering
- 3 ENGL 1013 Composition I
- 3 CHEM 1103 University Chemistry I
**Spring Semester 1**
2 BENG 1022 Biological Engr Design Studio I  
3 ENGL 1023 Technical Composition II  
3 CHEM 1123 University Chemistry II  
1 CHEM 1121L University Chemistry II Lab  
4 MATH 2564 Calculus II  
3 BIOL 1543 Principles of Biology  
1 BIOL 1541L Principles of Biology Lab  
17 semester hours

**Fall Semester 2**
2 BENG 2612 Biological Engr Design Studio II  
3 CHEG 2403 Thermodynamics, or  
CHEG 2313 Thermodynamics of Single Component Systems  
3 MEEG 2003 Statics  
4 PHYS 2054 University Physics I  
4 MATH 2574 Calculus III  
3 BIOL 2013 General Microbiology*  
1 BIOL 2011L General Microbiology Lab  
17 semester hours

**Spring Semester 3**
2 BENG 2622 Biological Engr Design Studio III  
4 PHYS 2074 University Physics II  
3 MEEG 2403 Thermodynamics, or  
CHEG 2313 Thermodynamics of Single Component Systems  
3 ELEG 2103 Electronic Circuits  
1 ELEG 2101L Electronic Circuits Lab  
3 CHEM 2613 Organic Physiological Chemistry*  
1 CHEM 2611L Organic Physiological Chemistry Lab  
17 semester hours

**Fall Semester 4**
3 BENG 4813 Senior Biological Engr Design I  
3 BENG 3733 Transport Phenomena in Biological Systems  
3 BENG Design Elective  
6 Humanities/Social Studies Elective  
15 semester hours

**Spring Semester 4**
2 BENG 4822 Senior Biological Engr Design II  
6 Humanities/Social Studies Elective  
14 semester hours

**129 Total hours**

SEE PAGE 321 FOR BIOLOGICAL ENGINEERING (BENG) COURSES

**CHEMICAL ENGINEERING (CHEG), RALPH E. MARTIN DEPARTMENT OF**

Thomas O. Spicer, III  
Head of the Department  
3202 Bell Engineering Center  
479-575-4951

- Distinguished Professor Havens  
- Distinguished Professors Emeriti Gaddy, Thatcher  
- University Professor Turpin  
- Professors Babcock, Clausen, King, Penney, Spicer, Thoma, Ulrich  
- Professors Emeriti Couper, Springer, Welker  
- Research Professors Cross, Silano  
- Associate Professors Ackerson, Beitle,  
- Instructor Myers  
- Visiting Assistant Professor Teo  
- Adjunct Professors Muralidhara, Siebenmorgen  
- Adjunct Associate Professor Eason

Chemical engineering deals with the creation, design, operation, and optimization of processes that derive practical benefits from chemical or physical changes. The profession is quite broad and has traditionally provided the technology for: supplying energy and fuel; synthesizing materials such as plastics, chemicals, fertilizers, and pharmaceuticals; and managing environmental and safety concerns of physical and chemical processes.

Chemical engineers have a variety of traditional job opportunities in industries such as petroleum production and refining, chemical and petrochemical manufacturing, mining, pharmaceutical production, and equipment manufacturing. Job opportunities may involve research, development, design, manufacturing, sales, or teaching as professional activities. The chemical engineer can also move easily into environmental engineering, nuclear engineering, oceanography, biomedical engineering, pharmacology, medicine, or other multidisciplinary fields.

In chemical engineering, the student obtains a broad foundation in chemistry, mathematics, physics, communication skills, economics, and the humanities. Courses in material and energy balances, thermodynamics, reaction kinetics, fluid mechanics, heat and mass transfer, process control, computer methods, safety, and design provide students with the background and learning skills required of the practicing chemical engineer. The curriculum includes elective courses that enable a student to prepare for immediate employment or further study at the graduate level. The chemical engineering program also serves as an excellent preparation for medical, dental, pharmacy, or law school.

The educational objective of the chemical engineering undergraduate program is to provide students with an adequate foundation in science, the humanities and social sciences, engineering sciences, engineering design methods, and specific chemical engineering skills, and to thereby prepare them, in a global context, to face the challenges of today’s complex and difficult problems.

The educational outcomes of our four-year curriculum are to assure that each student has had the opportunity to perform the following:

- apply a knowledge of mathematics, science, and engineering;
- identify, formulate, and solve engineering problems including, for example, development of the critical thinking process and

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the solution of mass and energy balances;
• design a system, component, or process to meet desired needs including, for example, determining the capital and operating costs for chemical process equipment and performing technical economic projections;
• locate, interpret, and use physical property data; when data are unavailable, design and conduct experiments, and interpret the resulting data;
• understand professional and ethical responsibility;
• use the techniques, skills, and modern engineering tools necessary for engineering practice including, for example, writing structured computer programs and using commercially available technical computer software;
• develop and use effective written and oral communication skills;
• function in multi-disciplinary teams;
• recognize the need to engage in life-long learning;
• understand the impact of engineering solutions in a global or societal context including, for example, being conscious of social, environmental, and safety concerns; and
• be familiar with contemporary issues.

These outcomes are reinforced and demonstrated in a senior capstone safety and design sequence.

Chemical Engineering Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Chemical Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2023 during the third year or gain exemption.

Fall Semester 1
4 MATH 2554 Calculus I
3 CHEM 1123 University Chemistry II
1 CHEM 1121L University Chemistry II Lab
3 ENGL 1013 Composition I
3 CHEG 1113 Intro. to Chem Engr I
17 semester hours

Spring Semester 1
4 MATH 2564 Calculus II
3 CHEG 1123 Intro. to Chem Engr II
3 ENGL 1023 Composition II
2 CHEG 1212L Chemical Engr Lab I
3 Humanities/social science elective
15 semester hours

Fall Semester 2
4 MATH 2574 Calculus III
3 CHEM 3603 Organic Chemistry I
1 CHEM 3601L Organic Chemistry I Lab
4 PHYS 2054 University Physics I
0 PHYS 2050L University Physics Lab I
1 CHEG 2221 Professional Practice Seminar
3 CHEG 2313 Thermodynamics of Single Component Systems
16 semester hours

Spring Semester 2
4 MATH 3404 Differential Equations
3 CHEM 3613 Organic Chemistry II
1 CHEM 3611L Organic Chemistry II Lab
4 PHYS 2074 University Physics II
0 PHYS 2070L University Physics II Lab
3 CHEG 2133 Fluid Mechanics
3 CHEG 3323 Thermodynamics of Multicomponent Systems
18 semester hours

Fall Semester 3
4 CHEM Elective
3 MEEG 2003 Statics
3 CHEG 3143 Heat Transport
2 CHEG 3232L Chemical Engr Lab II
3 CHEG 3253 Chem Engr Computer Methods
3 Humanities/social science Elective
18 semester hours

Spring Semester 3
4 CHEM Elective
3 MEEG 3013 Mechanics of Materials
3 CHEG 3333 Chem Engr Reactor Design
3 CHEG 3153 Non-Equil Mass Transfer
3 ECON 2143 Basic Economics
(ECON 2013 Principles of Macro-economics may be substituted.)
0 ENGL 2003 Advanced Composition or Exemption
16 semester hours

Fall Semester 4
3 CHEG 4163 Equil Stage Mass Transfer
3 CHEG 4413 Chem Engr Design I
3 CHEG 4813 Chemical Process Safety
3 Technical elective
3 Humanities/social science elective
15 semester hours

Spring Semester 4
2 CHEG 4332L Chem Engr Lab III
3 CHEG 4443 Chem Engr Design II
3 ELEG 3903 Electric Circuits and Machines
3 CHEG 4423 Auto Process Control
3 Technical elective
3 Humanities/social science elective
17 semester hours

132 Total hours required

Technical Elective Options in Chemical Engineering

Each student in chemical engineering is required to complete six semester hours of technical electives. Students may select these courses from upper division (3000 and above) courses in mathematics, engineering, and the sciences with the approval of their adviser. An undergraduate education in chemical engineering provides a firm foundation for many areas of specialization. The following groups of courses can strengthen the background of a student in a particular area of expertise; note that other technical electives are included on the list approved by the department and that not all of the following courses will meet the requirements of a technical elective.

Biotechnology/Biomedical Engineering
CHEG 5513 Biochemical Engineering Fundamentals
College of Engineering

CHEG 5523 Bioprocess Engineering
CHEM 3813 Introduction to Biochemistry, or
CHEM 5813 Biochemistry I, or
CHEM 5843 Biochemistry II
BIOL 2323/2321L General Genetics
CEMB 5911 Seminar in Cellular/Molecular Biology

Chemical Process Safety
CHEG 5273 Corrosion Control
INEG 3213 Safety Engineering
INEG 4223 Occupational Safety and Health Standards
FDSC 4223 Risk Analysis for Biological Systems
OMGT 4303 Industrial Safety Administration

Environmental Engineering
CHEG 5753 Air Pollution
CHEG 4263 Environmental Experimental Methodology
CHEG 4913 Environmental Engineering Chemodynamics
CHEG 5273 Corrosion Control
MEEG 4813 Air Pollution Abatement
MEEG 4843 Environmentally Conscious Design and Manufacturing
CVEG courses on an approved list available from the department.

Food Process Engineering
BENG 4703/4700L Food and Bioprocess Engineering
BENG 3712 Engineering Properties of Biological Materials
FDSC 4713/4710L Food Product and Process Development
FDSC 4124 Food Microbiology
FDSC 4223 Risk Analysis for Biological Systems
FDSC 4304/4300L Food Chemistry

Materials Science and Engineering
CHEG 5273 Corrosion Control
CHEG 5733 Polymer Theory and Practice
MEEG 4303 Materials Laboratory

Microelectronics
CHEG 5613 Microelectronics Fabrication and Materials
ELEG 4203 Semiconductor Devices
PHYS 3614 Modern Physics
MATH 3423 Advanced Applied Mathematics

Nuclear Power Engineering
CHEG 5273 Corrosion Control
MEEG 4603 Basic Nuclear Engineering
MEEG 4623 Radiation Protection and Shielding
MEEG 4633 Nuclear Power Generation
CHEM 5263 Nuclear Chemistry

Pre-medicine
BIOL 1543/1541L Principles of Biology
CHEM 3813 Introduction to Biochemistry
BIOL 2013/2011L General Microbiology
BIOL 2213/2211L Human Physiology
BIOL 2443/2441L Human Anatomy

Simulation and Optimization
CHEG 5033 Technical Administration
CHEG 5213 Advanced Chemical Engineering Calculations
INEG 3313 Engineering Statistics
INEG 3613 Introduction to Operations Research
INEG 4623 Introduction to Simulations
MATH 3083 Linear Algebra

CIVIL ENGINEERING (CVEG)

Kevin D. Hall
Head of the Department
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479-575-4954

- University Professor Emeritus LeFevre
- Professors Buffington, Dennis, Elliott, Gattis, Gross, Hall, Selvam, Wang, Young
- Associate Professors Edwards, Soerens
- Associate Professors Emeritus Pleimann
- Assistant Professors Hale, Heymsfield, Tooley, Williams (R.), Williams (S.)

Civil engineering is the oldest of all the engineering fields, yet it is as contemporary as the need to provide solutions to today’s environmental problems and to develop advanced transportation systems. The civil engineer plans, designs, builds, and operates projects for the advancement and well being of society while coordinating and conserving human resources. Civil engineering projects range from small to monumental and include public water systems, buildings, bridges, rail and highway networks, wastewater treatment plants, solid and hazardous waste disposal facilities, airports, and soil conservation and flood diversion controls.

The civil engineering profession offers a vast array of opportunities. Civil engineers may work in private employment or with public agencies. They may work indoors in activities such as planning and design, or outdoors in areas such as construction supervision. Employment is possible anywhere in the world.

The objectives of the civil engineering program are to produce graduates who are:
1. employable in any of the following fields: foundation, earthwork, and embankment design and analysis; water, wastewater, and waste handling and treatment; highway facility design and operation; and structural design and analysis.
2. academically prepared to pursue licensure as a Professional Engineer.
3. prepared to pursue an advanced education.

To fulfill these objectives, all students must take courses in geotechnical, environmental, transportation, and structural engineering. Courses are designed to present “real world” applications without sacrificing conceptual and theoretical basics. Students complete design problems in each of these areas; and, as part of the senior year, they participate in two major design projects.

Civil Engineering Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Civil Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2023 during the third year or gain exemption.

Fall Semester 1
3 ENGL 1013 Composition I
4 MATH 2554 Calculus I
2 CVEG 1012 Civil Engr Fund
3 CHEM 1103 University Chemistry I
1 CHEM 1101L University Chemistry I Lab
3 Humanities/social science elective
16 semester hours

**Spring Semester 1**
3 ENGL 1023 Technical Composition II
4 PHYS 2054 University Physics I
0 PHYS 2050L University Physics I Lab
3 CHEM 1123 University Chemistry II
1 CHEM 1121L University Chemistry II Lab
4 MATH 2564 Calculus II
2 GNEG 1122 Introduction CAD
17 semester hours

**Fall Semester 2**
4 MATH 2574 Calculus III
3 MEEG 2003 Statics
3 CVEG 1113 CE Computer Applications
3 Humanities/social science elective
3 CVEG 2053 Surveying Systems
1 CVEG 2051L Surveying Systems Lab
17 semester hours

**Spring Semester 2**
3 CVEG 2113 Structural Materials
3 INEG 3313 Engineering Statistics
4 MATH 3404 Differential Equations
3 MEEG 3013 Mechanics of Materials
3 Humanities/social science elective
16 semester hours

**Fall Semester 3**
4 CVEG 3304 Structural Analysis
3 CVEG 3133 Soil Mechanics
3 CVEG 3213 Hydraulics
3 CVEG 3413 Transportation Engineering
2 GEOL 3002 Geology for Engineers
3 Humanities/social science elective
18 semester hours

**Spring Semester 3**
2 CVEG 3022 Public Works Economics
3 CVEG 3223 Hydrology
3 CVEG 3243 Environmental Engineering
3 CVEG 4313 Structural Steel Design I
4 Science elective
3 Humanities/social science elective
0 ENGL 2003 Advanced Composition or Exemption
18 semester hours

**Fall Semester 4**
3 CVEG 4143 Foundation Engineering
3 CVEG 4303 Reinforced Concrete Design I
3 CVEG 4433 Transportation Pavements & Materials
2 CVEG 4852 Professional Practice Issues
6 Engineering electives
1 Civil Engineering design elective
18 semester hours

**Spring Semester 4**
3 CVEG 4513 Construction Mgmt
6 Engineering electives
1 Civil Engineering design elective
3 Humanities/social science elective
16 semester hours

**136 Total hours**

**Elective Courses**

Students must select four 3-hour engineering elective courses in conference with their adviser. The selection must include at least three civil engineering courses. The fourth course can be a civil engineering course or one of the following: MEEG 2013 Dynamics, MEEG 2403 Thermodynamics, ELEG 3903 Electric Circuits and Machines, MEEG 3703 Numerical Methods. Normally, the civil engineering courses are selected from among the 4000-level elective CVEG courses. Exceptional students may be allowed to choose from the 5000 (graduate-level) course series. Humanities and social science electives are selected from courses approved by the college. The science elective requirement is satisfied by completing one of the following course sequences: CHEM 3603 and CHEM 3601L, Organic Chemistry, GEOG 3513 and GEOG 3511L, Structural Geology, BIOL 2013 and BIOL 2011L, General Microbiology, or PHYS 2074 and PHYS 2070L, University Physics II. Lists of approved electives are on file in the department office.

**Civil Engineering Design Electives**

Students must complete two of the following four CVEG design project electives: CVEG 4811 Environmental Design Project, CVEG 4821 Geotechnical Design Project, CVEG 4831 Structural Design Project, and CVEG 4841 Transportation Design Project. Each design project elective is associated with a specific design-oriented course. The associated course must be taken at the same time as the design project elective. The associated courses may be taken alone but the design electives cannot.

**Honors Program Requirements**

Students enrolled in the Honors College who are to receive the Bachelor of Science in Civil Engineering must complete a minimum of 12 hours of honors credit. At least 6 hours must be completed within the Civil Engineering program including at least 3 hours resulting in an Honors Thesis. The CVEG honors courses are acceptable as engineering electives and in some cases may be substituted for required courses. The following Civil Engineering courses are offered for honors credit: CVEG 491V H Honors Studies in Geotechnical Engineering, CVEG 492V H Honors Studies in Environmental Engineering, CVEG 493V H Honors Studies in Structural Engineering, CVEG 494V H Honors Studies in Transportation Engineering, and CVEG 4983 H Undergraduate Honors Thesis.

SEE PAGE 339 FOR CIVIL ENGINEERING (CVEG) COURSES

**COMPUTER SCIENCE AND COMPUTER ENGINEERING (CSCE)**

Jerry Yeargan
Head of the Department
311 Engineering Hall
479-575-6197

- Distinguished Professor Yeargan
- Professors Crisp, Deaton, Sketh, Thompson (C.)
- Associate Professors Apon, Beavers, Li, Lusth, Panda, Parkerson,
The faculty of the Computer Science and Computer Engineering department is engaged in multidisciplinary academic research, course offerings, and student projects in areas such as: high performance and scientific computing, grid computing, agents, middleware, networking, data security, nanotechnology, graph theory, and subsystem design.

The educational objectives of the department are to produce graduates who are recruited in a competitive market and make valuable contributions to a wide variety of industries, particularly in computer and information technology; succeed in graduate or professional studies; pursue life-long learning and continued professional development; and undertake leadership roles in their profession, in their communities, and in the global society.

Since almost all of today’s complex systems encompass hardware and software elements, the computer engineering degree (CENG) has required sequences of courses in both hardware and software aspects of computer applications and design. Computer engineering graduates must acquire the skills required to design, build, and test complex digital systems. At the advanced level, students are exposed to hands-on experience with open-ended problems with opportunities for research and design.

A degree in computer science (CSCE) provides unique diversity in career choices. Computer science graduates can design, implement, or manage computer systems, as well as adapt computers to new applications. Computer science core courses include the fundamentals of programming concepts, data structures, operating systems, algorithms, formal languages, database management systems, and programming languages.

Humanities and social science electives are selected from courses approved by the College of Engineering. The Undergraduate Handbook has a list of approved basic science, mathematics, and technical electives. Any course not included in these lists requires faculty approval.

The following section contains the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) and the Bachelor of Science in Computer Science (B.S.C.S.) degrees and suggested sequences for each.

**Computer Engineering Eight-Semester Program**

The following section contains the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

**Students who have earned 45 hours must take the Rising Junior Exam.**

Students must also take ENGL 2023 during the third year or gain exemption.

**Fall Semester 1**

- 4 MATH 2554 Calculus I
- 3 CHEM 1103 University Chemistry
- 1 CHEM 1101L University Chemistry Lab
- 3 CSCE 1113 Programming Foundations I
- 1 CSCE 1111L Programming Foundations I Lab
- 3 ENGL 1013 English Composition
  - 15 semester hours

**Spring Semester 1**

- 4 MATH 2564 Calculus II
- 4 PHYS 2054 University Physics I
- 0 PHYS 2050L University Physics I Lab
- 3 CSCE 1123 Programming Foundations II
- 1 CSCE 1121L Programming Foundations II Lab
- 3 ENGL 1023 Composition II
- 3 MATH 2103 Discrete Math
  - 18 semester hours

**Fall Semester 2**

- 4 MATH 2574 Calculus III
- 4 PHYS 2074 University Physics II
- 0 PHYS 2070L University Physics II Lab
- 3 CENG 2113 Digital Techniques I
- 0 CENG 2110L Digital Techniques I Lab
- 3 CSCE 2143 Data Structures
- 3 Humanities/social sciences elective
  - 17 semester hours

**Spring Semester 2**

- 4 MATH 3404 Differential Equations
- 3 ELEG 3933 Circuits and Electronics
- 3 CENG 2213 Computer Organization
- 3 CENG 2123 Digital Techniques II
- 0 CENG 2120L Digital Techniques II Lab
- 3 Basic science elective
  - 16 semester hours

**Fall Semester 3**

- 3 CENG 3953 Logic Synthesis-VHDL
- 3 CSCE 3313 Algorithms
- 3 Technical Elective
- 3 History/Government requirement
- 3 Humanities/social sciences elective
  - 15 semester hours

**Spring Semester 3**

- 3 CSCE 3613 Operating Systems
- 3 CSCE 3513 Software Engineering
- 3 PHIL 3103 Ethics and the Professions
- 3 Technical Elective
- 3 STAT 3013 Introduction to Probability and Statistics (INEG 3313 may be substituted)
- 0-3 ENGL 2003 Advanced Composition or Exemption
  - 15 semester hours

**Fall Semester 4**

- 1 CENG 4571 Senior Design Project I
- 3 Technical electives/hardware
- 3 Technical electives/software
- 3 Humanities/social sciences elective
- 3 Free Elective
- 3 Free Elective
  - 16 semester hours

**Spring Semester 4**

- 3 CENG 4973 Senior Design Project II
- 3 CENG 4213 Intro. to Computer Architecture
- 3 Technical electives/hardware
- 3 Technical electives/software
3 Humanities/social sciences elective (3000+)
15 semester hours

127 Total hours

Computer Science Eight-Semester Program
The following section contains the list of courses required for the Bachelor of Science in Computer Science (B.S.C.S.) degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.
Students must also take ENGL 2023 during the third year or gain exemption.
Computer Science majors are required to take 12 hours of natural science consisting of either PHYS 2054/2050L, PHYS 2074/2070L and CHEM 1103/1101L; or CHEM 1103/1101L, CHEM 1123/1121L, and PHYS 2054/2050L.

Fall Semester 1
4 MATH 2554 Calculus I
4 PHYS 2054 University Physics I
0 PHYS 2050L University Physics I Lab
3 CSCE 1113 Programming Foundations I
1 CSCE 1111L Programming Foundations I Lab
3 ENGL 1013 English Composition
15 semester hours

Spring Semester 1
4 MATH 2564 Calculus II
4 PHYS 2074 University Physics II
0 PHYS 2070L University Physics II Lab
3 CSCE 1123 Programming Foundations II
1 CSCE 1121L Programming Foundations II Lab
3 ENGL 1023 Composition II
3 MATH 2103 Discrete Mathematics
18 semester hours

Fall Semester 2
3 MATH 3083 Linear Algebra
3 CHEM 1103 University Chemistry I
1 CHEM 1101L University Chemistry I Lab
3 CENG 2113 Digital Techniques I
0 CENG 2110L Digital Techniques I Lab
3 CSCE 2143 Data Structures
3 Humanities/social sciences elective
16 semester hours

Spring Semester 2
3 MATH 3103, Combinatorics
3 Free elective
3 CENG 2213, Computer Organization
3 Humanities/social sciences elective
3 History/government requirement
15 semester hours

Fall Semester 3
3 STAT 3013 Intro to Probability and Statistics
3 CS Elective
3 CSCE 3313 Algorithms
3 Humanities/social sciences elective
3 Humanities/social sciences elective
15 semester hours

Spring Semester 3
3 CSCE 3613 Operating Systems
3 CSCE 3513 Software Engineering
3 Free elective
3 Free elective
3 PHIL 3103 Ethics & the Profession
0 ENGL 2003 Advanced Composition or Exemption
15 semester hours

Fall Semester 4
1 CSCE 4561 CS Capstone I
3 CSCE 4313 Programming Languages
3 CSCE 4523 Database Management
3 CS elective
3 Free elective
3 Humanities/social sciences elective
16 semester hours

Spring Semester 4
3 CSCE 4963 CS Capstone II
3 CS elective
3 CSCE 4323 Formal Languages
3 Free elective
3 Humanities/social sciences elective (3000+)
15 semester hours

125 Total hours

Degree Program Changes
Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, policies, and program requirements in their fields of study. Changes made in curriculum at a level beyond that at which a student is enrolled might become graduation requirements for that student. Changes made in the curriculum at a level lower than the one at which a student is enrolled are not required of that student. Students should consult their departmental adviser for additional information.

Requirements for Departmental Honors
Computer Science and Computer Engineering
The Honors Program in Computer Science and Computer Engineering is designed for the superior student and is intended to help the student develop a more comprehensive view of Computer Science and Computer Engineering. The program provides a vehicle for the recognition of achievements of work beyond the usual course of study. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the candidate’s whole program of honors studies.

The department considers the following requirements necessary for graduation with honors:
1. The candidate must satisfy the requirements set forth by the College of Engineering.
2. A student must obtain at least a 3.50 grade-point average in required Computer Engineering and/or Computer Science courses.
3. The student must complete 7 hours of Honors credit in the major, which includes 4 hours of Honors Thesis taken as two...
successive semesters of CSCE 4912H or CENG 4912H and 3 hours of non-thesis.

Requirements for the Bachelor of Arts degree with a Major in Computer Science (B.A.C.S):
At least 30 hours in computer science including CSCE 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and CSCE 4313 plus 13 hours of electives to be selected from a list of CSCE courses numbered 3000 or higher offered by the department.

The mathematics requirements of the degree are MATH 2043 or MATH 2554, MATH 2103, and MATH 3103. The remaining courses should meet the requirements for a B.A. degree listed in the Fulbright College section.

Requirements for a Minor in Computer Science:
CSCE 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and either CENG 2213 or CSCE 4313.

SEE PAGE 326 FOR COMPUTER ENGINEERING (CENG) COURSES AND PAGE 337 FOR COMPUTER SCIENCE (CSCE) COURSES

ELECTRICAL ENGINEERING (ELEG)

Aicha Elshabini
Head of the Department
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479-575-3009

• Distinguished Professor Brown (W.D.), Elshabini, Yeargan, Vasundara Varadan, Vijay Varadan
• University Professor Schmitt
• Professors Ang, Balda, Manasreh, Mantooth, Martin, Naseem, Schaper, Sohraby, Waite
• Associate Professors Barlow, Brown (R.L.), Burkett, El-Shenawee, Caldwell, Gattis, McCann
• Assistant Professor Lee
• Professors Emeritus Jones, Mix, Stephenson, Webb

Electrical engineering is a profession in charge of designing electrical devices, components, integrated chips, computer chips, integrated circuits, and electronic assemblies to benefit mankind. This may encompass systems such as radar and satellite antennas, microelectronics, optical, portable or wireless electronics and communications, and embedded computers in everyday consumer, homeland security, detection and identification of biological threats, or military electronics.

The electrical engineering graduate is at the forefront of the technology leading to the dramatic increase in global communications, the accelerated use of electric power, the real-time embedded control systems with smart highways and smart vehicles, the dominating influence of the computer on modern society, the wireless chemical and biological nanosensors for network solution, the miniaturization of electronics, and a host of other developments. The increased use of electronic equipment for measurement, network, communication, and control has spread into such diverse areas as improved health care, transportation, recreation, agricultural production, marketing, manufacturing, underwater, space, information technology, networking, renewable energy, computer hardware, automotives, and countless others. This widespread and expanding use of electronic equipment in virtually all fields has made electrical engineering the largest of all scientific disciplines and assures a continuing demand for electrical engineering graduates throughout business and government.

The University of Arkansas is the state land-grant university and is a nationally competitive, student-centered, research university serving Arkansas and the world. As such, our mission is education, research, and service. The electrical engineering program is designed to offer a high-quality course of instruction involving classroom, laboratory, and extracurricular activities that results in graduates qualified and prepared to meet the demands of a professional career in the present and future work place and able to assume a responsible place of leadership in a complex technological society. The department also participates in the Honors Program to challenge superior students with a more in-depth academic program and research experience and to provide a structure for working more closely with faculty members and other students in a team environment.

The educational mission of the department is conducted through both the undergraduate and graduate programs. The educational objectives for the undergraduate program, which leads to a Bachelor of Science degree in electrical engineering, are to produce graduates who:

1. are recruited in a competitive market and valued as reliable and competent employees by a wide variety of industries, in particular electrical and computer engineering industries;
2. succeed in graduate studies, such as engineering, science, law, medicine, business, and other professions, if pursued;
3. understand the need for life-long learning and continued professional development for a successful and rewarding career; and
4. accept responsibility for leadership roles in their profession, in their communities, and in the global society.

The graduate program offers a Master of Science degree in Electrical Engineering, a Master of Science degree in Telecommunications Engineering, a Master of Science degree in Engineering, and a Doctor of Philosophy degree in Engineering. Having received additional instruction and hands-on experience beyond the undergraduate level, an additional educational objective for the graduate program is to produce graduates that are prepared to promptly address critical issues and assume advanced positions in the profession, such as management, design, and development.

The research mission of the department is conducted mainly through the graduate program. Internal and external funded research projects serve to:

1. discover new knowledge, address technical problems, and develop new electrical/electronic technologies;
2. provide the tools and resources which keep our faculty at the cutting edge of electrical engineering;
3. provide financial support for graduate students and gifted undergraduate students; and
4. improve the quality of life for citizens of Arkansas and the world.

The graduate program also supports the undergraduate program by giving top undergraduate students access to research laboratories with state-of-the-art equipment and software. Topics covered in graduate courses migrate into senior undergraduate elective courses and eventually into required undergraduate courses.

Faculty, students, administrators, and staff conduct the service mission of the department. The electrical engineering program, including faculty, students, staff, and facilities, is a major resource of the state, region, and nation. Faculty members are encouraged to provide services to both the community and the profession. Faculty members are active in local, state, national, and international professional and service organizations, as well as public and private schools involving grades K-12.

The electrical engineering curriculum is designed to provide students with a knowledge of scientific principles and methods of engineering analysis to form a solid foundation for a career in design, research and development, manufacturing and processing, measurement and characterization, or management. Students progressively build their design experience throughout the curriculum and demonstrate this ability in the senior design lab, the Honors electric-
cal engineering design I and II, and the senior honors thesis. Honors Colloquium provides information on special topics and issues in the electrical engineering discipline. Equally important, the curriculum introduces students to subjects in the humanities, social sciences, success, and ethics so they may better understand the interaction of technology and society.

The electrical engineering curriculum is divided into three phases. The first year concentrates on development of a sound understanding of basic science and mathematics. The second and third year course work further develops scientific principles and covers the basic core of the professional curriculum in electrical engineering. The fourth year is composed primarily of senior-level elective courses. At this time, the student, in conjunction with his or her adviser, may plan a program to concentrate in one or more of the technical specializations within electrical engineering, such as power, electronics, mixed-signal, microelectronics, circuits, digital or computer hardware, communications, controls, electromagnetics, sensors, and nanotechnology. This final year permits the student to tailor a program suited to his or her individual career objectives.

The graduation requirement in electrical engineering is 128 semester hours.

**Electrical Engineering Eight-Year Degree Program**

The following section contains the list of courses required for the Bachelor of Science degree in Electrical Engineering and a suggested eight-semester sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

**Students who have earned 45 hours must take the Rising Junior Exam.**

Students must also take ENGL 2023 during the third year or gain exemption.

In addition to the graduation requirements for the College of Engineering and the University of Arkansas, candidates for an electrical engineering degree must have earned a grade-point average of no less than 2.00 on all ELEG courses, excluding ELEG laboratories.

| Fall Semester 1 | 3 GNEG 1003 Intro. to Engineering |
| 3 ENGL 1013 Composition I |
| 4 MATH 2554 Calculus I |
| 3 ELEG 1903 Digital Design I |
| 0 ELEG 1900L Digital Design I Lab |
| 3 History/Government Requirement |
| 16 semester hours |

| Spring Semester 1 | 3 ENGL 1023 Technical Composition II |
| 4 MATH 2564 Calculus II |
| 3 ELEG 1913 Digital Design II |
| 0 ELEG 1910L Digital Design II Lab |
| 3 History/Government Requirement |
| 16 semester hours |

| Fall Semester 2 | 3 CSCE 1113 Programming Foundations I |
| 1 CSCE 1111L Programming Foundations I Lab |
| 3 ELEG 2103 Electric Circuits I |

| Spring Semester 2 | 3 CENG 1123 Programming Foundations II |
| 1 CENG 1121L Programming Foundations II Lab |
| 4 Math/Science Elective |
| 3 ELEG 2113 Electric Circuits II |
| 1 ELEG 2111L Electric Circuits II Lab |
| 4 MATH 3404 Differential Equations |
| 16 semester hours |

| Fall Semester 3 | 3 ELEG 3123 Analog Signal Processing |
| 1 ELEG 3121L Analog Signal Proc Lab |
| 3 ELEG 3213 Electronics I |
| 1 ELEG 3211L Electronics I Lab |
| 3 ELEG 3923 Microprocessor System Design |
| 0 ELEG 3920L Microprocessor Sys Design Lab |
| 3 Humanities/social Science elective |
| 3 Math/Science Elective |
| 0 ENGL 2023 Advanced Composition |
| 17 semester hours |

| Spring Semester 3 | 3 ELEG 3133 Digital Signal Processing |
| 1 ELEG 3131L Digital Signal Proc Lab |
| 3 ELEG 3223 Electronics II |
| 1 ELEG 3221L Electronics II Lab |
| 3 ELEG 3303 Electromechanical Energy Conversion |
| 1 ELEG 3301L Electromechanical Energy Conv Lab |
| 3 ELEG 3703 Electromagnetics |
| 15 semester hours |

| Fall Semester 4 | 1 ELEG 4061 Electrical Engineering Design I |
| 3 ELEG 3143 Stochastic Signal Processing |
| 3 Electrical Eng Technical Elective |
| 3 Engineering Science Elective |
| 3 Technical Elective |
| 3 Upper-level humanities/social Science elective |
| 16 semester hours |

| Spring Semester 4 | 1 ELEG 4071 Electrical Engineering Design II |
| 6 Electrical Eng Technical Elective |
| 3 Technical Elective |
| 3 Upper-level humanities/social Science elective |
| 3 Humanities/social Science elective |
| 16 semester hours |

**129 Total hours**

**Degree Program Changes**

A student must meet all requirements of the degree programs and is expected to keep informed concerning current regulations, policies, and program requirements in a chosen field of study. Changes made in curriculum at a level beyond that at which a student is enrolled may become graduation requirements for that student. Changes made in the curriculum at a level lower than the one at which a student is
enrolled are not normally required for that student. Students should consult their adviser for additional information.

**Electrical Engineering Honors Program**

To graduate with Honors in electrical engineering, students must be a member of the Honors College and complete a minimum of 12 hours of honors credit of which 6 hours must be Electrical Engineering courses and includes the following courses: ELEG 4061H – Honors Electrical Engineering Design I, ELEG 4071H – Honors Electrical Engineering Design II, and ELEG 4081H – Senior Thesis. Students must also have a minimum cumulative GPA of 3.50 to graduate with Honors in Electrical Engineering.

**Recommended Technical Studies**

Students in electrical engineering are required to complete 15 semester hours of technical electives. A minimum of nine semester hours of these courses must be 4000- or 5000-level electrical engineering elective courses. A student may select the remaining six semester hours from upper-division technical courses in electrical engineering, mathematics, engineering, and the sciences. Not more than six semester hours total in ELEG 488V and ELEG 489V may be credited toward technical electives.

**Communications**

- ELEG 4603 Deterministic DSP System Design
- ELEG 4623 Communication Systems
- ELEG 4683 Intro. to Image Processing
- ELEG 4713 Electromagnetic Transmission
- ELEG 5173L Digital Signal Proc Lab
- ELEG 5183L DSP Digital Communications Lab
- ELEG 5193L Advanced DSP Proc Lab
- ELEG 5403 Systems Theory
- ELEG 5603 Wireless Data Communications
- ELEG 5613 Introduction to Telecommunications
- ELEG 5623 Information Theory
- ELEG 5633 Detection and Estimation
- ELEG 5643 Computer Communication Networks
- ELEG 5653 Artificial Neural Networks
- ELEG 5673 Pattern Recognition
- ELEG 5683 Image Processing
- ELEG 5693 Wireless Communications
- ELEG 5713 Antennas and Radiation
- ELEG 587V Communication Theory
- ELEG 587V Probability Theory and Stochastic Processes
- ELEG 587V Spread Spectrum Systems

**Computers**

- ELEG 4683 Intro. to Image Processing
- ELEG 4933 Minicomputer Applications
- ELEG 4943 Digital Systems Design
- ELEG 4983 Intro. to Computer Architecture
- ELEG 5153 Real Time Data Acquisition Systems
- ELEG 5163 Advance Microcontroller Design Project
- ELEG 5173L Digital Signal Proc Lab
- ELEG 5643 Computer Comm Networks
- ELEG 5653 Artificial Neural Networks
- ELEG 5683 Image Processing
- ELEG 5913 Parallel Programming
- ELEG 5963 Computer Systems Optimization
- CSCE 2143 Data Structures Applications
- CENG 4813 Computer Graphics
- CENG 3943 Engineering Applications of Unix
- CENG 4423 Computer Systems Analysis

**Controls**

- ELEG 4403 Control Systems
- ELEG 4463L Control Systems Lab
- ELEG 4603 Deterministic DSP System Design
- ELEG 5173L Digital Signal Proc Lab
- ELEG 5403 Systems Theory
- ELEG 5413 Stochastic Control Systems
- ELEG 5423 Optimal Control Systems
- ELEG 5433 Digital Control Systems
- ELEG 5443 Nonlinear Systems Analysis
- ELEG 5453 Adaptive Filtering and Control
- ELEG 5653 Artificial Neural Networks

**Digital Systems**

- ELEG 4603 Deterministic DSP System Design
- ELEG 4943 Digital Systems Design
- ELEG 4963 Field Programmable Gate Array Lab
- ELEG 5113 Stochastic DSP Systems Design
- ELEG 5163 Advanced Microcontroller Design
- ELEG 5173L Digital Signal Proc Lab
- ELEG 5183L Digital Comm Lab
- ELEG 5193L Advanced DSP Proc Lab
- ELEG 5653 Artificial Neural Networks
- ELEG 5673 Pattern Recognition
- ELEG 5683 Image Processing

**Electromagnetics**

- ELEG 4713 Electromagnetic Transmission
- ELEG 4723 Introduction to RF and Microwave
- ELEG 487V Introduction to Antennas
- ELEG 5633 Detection and Estimation
- ELEG 5723 Advanced Microwave Design
- ELEG 5743 Radar Systems
- ELEG 5763 Advanced Topics in Electromagnetics

**Energy Systems**

(Power Distribution, Electric Machines, Power Electronics, Electric Propulsion)

- ELEG 4323 Switch Mode Power Conversion
- ELEG 4403 Control Systems
- ELEG 4463L Control Systems Lab
- ELEG 4503 Electric Power Dist Systems
- ELEG 4513 Power System Analysis
- ELEG 4523 Intro. to Power Electronics
- ELEG 4533 EMC in Power Electronics
- ELEG 5313 Power Semiconductor Devices
- ELEG 5513 Electric Power Quality
- ELEG 5533 Power Electronics and Motor Drives
- ELEG 5543 Communication Networks for Motion Control
- MEEG 4603 Basic Nuclear Engineering

**Microelectronics**

(Device, Modeling, Fabrication, Design, Test)

- ELEG 4203 Semiconductor Devices
- ELEG 4223 Design and Fabrication of Solar Cells
- ELEG 4233 Introduction to Integrated Circuit Design
- ELEG 4243 Analog Integrated Circuits
- ELEG 4273 Electronics Manufacturing Processes
- ELEG 4283 Mixed Signal Test Eng I
- ELEG 4293 Mixed-Signal Modeling and Simulation
- ELEG 4323 Switch Mode Power Conversion
- ELEG 487V Advances in Integrated Circuit Processing
- ELEG 487V Microelectronic Fabrication
- ELEG 487V Microsensors, MEMS, and Smart Devices
The following courses are applicable to all of the technical specialization areas listed above.

INEG 3113 Law and Ethics
INEG 3213 Safety Engineering
INEG 3413 Eng Economic Analysis
INEG 4223 Occupational Safety and Health Standards
INEG 4443 Engineering Management

**Mathematics/Science Elective**

Each student in electrical engineering is required to complete three semester hours of mathematics or science elective to be chosen from the following courses:

- MATH 3083 Linear Algebra
- MATH 3353 Numerical Methods in Analysis
- MATH 3423 Advanced Applied Mathematics
- MATH 3443 Complex Variables for Application
- STAT 3013 Intro. to Probability and Statistics
- CHEM 3504 Physical Chemistry I
- CHEM 3603 Organic Chemistry I
- PHYS 2094 University Physics III
- PHYS 3113 Analytical Mechanics
- PHYS 3544 Optics
- PHYS 3614 Modern Physics
- MEEG 2703 Computer Methods in Mechanical Engineering

SEE PAGE 345 FOR ELECTRICAL ENGINEERING (ELEG) COURSES

**INDUSTRIAL ENGINEERING (INEG)**

John English  
Head of the Department  
4207 Bell Engineering Center  
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- Distinguished Professor White  
- Professors English, Johnson, Meller  
- Associate Professors Cassidy, Fant, Mason, Nachtmann, Pohl, Rossetti  
- Assistant Professors Buyurgan, Chimka, Nam  
- Adjunct Associate Professor Gattis

The mission of the industrial engineering department at the University of Arkansas is to be a nationally competitive, student-centered industrial engineering program serving Arkansas and the world through undergraduate and graduate studies and leading-edge research programs.

Industrial engineers are concerned with improving organized activity. The physical arrangement of people, equipment, and material significantly influences the effectiveness of any organization — whether the organization is industrial, governmental, or commercial.

Today’s industrial engineers develop applications of new processing automation and control technology; install data processing systems, performance measures and standards, job evaluation and wage and salary programs; research new products and product applications; devise ways to improve productivity through application of technology and human factors; select operating processes and methods to accomplish a given task using proper tools and equipment; design facilities, management systems, operations procedures, storage systems; improve allocation of resources, planning and control systems for distribution of goods and services, production, inventory, quality and plant maintenance; enhance plant environment and the quality of working life; evaluate reliability and quality performance; implement office systems, procedures, and policies; analyze complex business problems through operations research; conduct long-range organization studies, plant location surveys, system effectiveness studies; and study potential markets for goods and services, raw material sources, labor supply, energy resources, financing and taxes.

Industrial engineers integrate engineering skills with mathematics and computer science tools, providing systematic ways to maximize productivity and quality while minimizing time and cost.

The goal of the Industrial Engineering Undergraduate Program at the University of Arkansas is to prepare men and women for professional careers and graduate studies in Industrial Engineering. We provide a foundation in mathematics, science, humanities and social sciences, engineering science, and engineering design to produce Industrial Engineers with the intellectual, technical, and professional competence to develop, implement, and manage industrial engineering solutions to complex problems in industry, government, and society.

The IE Program Objectives represent and describe the expected accomplishments of our graduates resulting from participation within our program within the first few years after graduation. Our objectives have been developed to address the needs of our constituencies and to be consistent with and supportive of our mission and programmatic goals. The IE Program Objectives are as follows:

1. to train and educate students in the mathematics, science, methodologies, computational skills, and analysis techniques of Industrial Engineering practice, including such core Industrial Engineering topics as probability, statistics, engineering economics, human factors, engineering management, computing, and operations research applied to manufacturing, logistics, and service systems;
2. to develop students with written and oral communication skills, teamwork skills, professionalism, and ethics so that they can contribute to Industrial Engineering practice and leadership within the profession;
3. to develop students who possess the ability to design, improve, and manage integrated systems of people, technologies, material, information, and equipment within the context of societal and contemporary issues in engineering practice such as safety and health;
4. to develop students who possess the ability to solve unstructured problems by collecting, modeling, analyzing, and interpreting data within Industrial Engineering practice;
5. to make students aware of the need for, and to provide the ability to accomplish, life-long learning, continuing education, and professional growth within the field of Industrial Engineering.

These specific objectives are reinforced by a senior capstone design course in which the student must apply the skills to a comprehensive design problem for an industry setting. This course integrates preceding courses through development of physical systems and organizational characteristics, financial aspects, product analysis, equipment selection, production layout, distribution systems, and overall economic analysis.

The total graduation requirement in industrial engineering is 128 hours. For further information please visit us on the World Wide Web at http://www.ineg.uark.edu/.
Industrial Engineering Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Industrial Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2023 during the third year or gain exemption.

Fall Semester 1
3 INEG 1103 Principles of Indus Engr
4 MATH 2554 Calculus I
3 ENGL 1013 Composition I
3 CHEM 1103 University Chemistry I
1 CHEM 1101L Univ Chemistry I Lab
14 semester hours

Spring Semester 1
4 MATH 2564 Calculus II
3 INEG 1403 Industrial Cost Analysis
3 ENGL 1023 Technical Composition II
3 Science elective
13 semester hours

Fall Semester 2
4 MATH 2574 Calculus III
3 Computer Elective I
3 INEG 3313 Engineering Statistics
4 PHYS 2054 University Physics I
3 ECON 2143 Basic Economics
17 semester hours

Spring Semester 2
4 MATH 3404 Differential Equations
3 Computer Elective II
4 PHYS 2074 University Physics II
3 INEG 3413 Eng Economic Analysis
3 INEG 3333 Industrial Statistics
17 semester hours

Fall Semester 3
3 INEG 3713 Methods and Standards
3 INEG 4623 Intro. to Simulation
3 Engineering Science Elective I
3 ELEG 3903 Electric Circuits and Machines
3 INEG 3513 Manuf Design and Processes
3 (History or government requirement:
   HIST 2003, HIST 2013, or PLSC 2003)
18 semester hours

Spring Semester 3
3 INEG 3613 Intro. to Operations Research
3 Engineering Science Elective II
3 INEG 4523 Automated Production
3 Engineering Science Elective III
3 Humanities/social science electives
0 ENGL 2003 Advanced Composition or Exemption
15 semester hours

Fall Semester 4
3 INEG 4433 Sys Engineering and Management
   (An upper-level ROTC course may be substituted.)
3 INEG 4543 Materials Handling
3 Technical elective
3 INEG 4723 Ergonomics
6 Humanities/social science electives
18 semester hours

Spring Semester 4
3 INEG 4553 Production Planning/ Control
4 INEG 4904 I.E. Design
3 Humanities/social science elective
6 Technical electives
16 semester hours

128 Total hours

Technical Electives

The purpose of technical electives is to provide students with the opportunity to expand their education along lines of particular interest to them. The approved list of technical electives is available in the industrial engineering department. At least three hours must be selected from INEG courses.

Humanities/Social Science Electives

Although any elective included on the humanities/social science list may be selected, PSYC 2003 General Psychology is recommended for industrial engineers.

Science Elective

The approved list of science electives is available in the industrial engineering departmental office.

Computer Elective

The approved list of computer electives is available in the industrial engineering departmental office.

Engineering Science Electives

The approved list of engineering science electives is available in the industrial engineering departmental office.

SEE PAGE 367 FOR INDUSTRIAL ENGINEERING (INEG) COURSES

MECHANICAL ENGINEERING (MEEG)

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• Distinguished Professor Saxena
• Giffels Professor Bhat
• Professors Jong, Malshe, Rencis, Schmidt, West
• Associate Professors Couvillion, Gordon, Nutter, Roe, Springer, Tung
• Assistant Professor Zou
• Instructor Davis
• Adjuncts Batzer, Cole, Hamilton

The mechanical engineering program is designed to offer a high-
quality course of instruction involving classroom, laboratory, and extracurricular activities that results in graduates who are qualified and prepared to meet the demands of a professional career in the present and future work place and be able to assume a responsible place of leadership in a complex technological society.

The courses offered in mechanical engineering provide the student with a broad understanding of fundamental scientific principles that serve as a background for many fields of specialization. The undergraduate curriculum is designed to stress basic engineering principles and to assist in developing creative thinking. Emphasis is placed on the science and art of designing machines and systems, of converting energy into useful forms, and developing a basic understanding of engineering mechanics. The undergraduate program leads to a Bachelor of Science degree in Mechanical Engineering; its educational objectives are to produce graduates who:

1. effectively analyze and design mechanical systems and energy systems;
2. contribute to the success of companies in Arkansas and the rest of the world through the practice of mechanical engineering;
3. meet or exceed the needs and expectations of mechanical engineering employers in industry, government, and private practice;
4. engage in professional activities that promote the mechanical engineering profession and provide continuing self-development;
5. succeed in graduate study and research if pursued.

The Bachelor of Science in Mechanical Engineering curriculum includes, in addition to the humanities/social science elective courses, a total of 12 hours of technical and science electives. A student must select these electives with the approval of his or her adviser. It is expected that electives will be chosen to provide a coherent program within one or more areas of specialization or options available to mechanical engineers. Areas of specialization are available in the nuclear, mechanical systems design, materials, thermal systems design, and engineering mechanics fields. Current options include pre-medical, management, business, and astronautics.

The first-year curriculum is essentially the same as prescribed for all engineering freshmen. The full curriculum follows, with the number of credit hours at the left, preceding course numbers and titles.

**Mechanical Engineering Eight-Semester Degree Program**

The following section contains the list of courses required for the Bachelor of Science in Mechanical Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students interested in obtaining a sequencing schedule of courses may contact the Mechanical Engineering office.

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

**Students who have earned 45 hours must take the Rising Junior Exam.**

Students must also take ENGL 2023 during the third year or gain exemption.

| Fall Semester 1 | 3 ENGL 1013 Composition I |
| | 3 CHEM 1103 University Chemistry I |
| | 1 CHEM 1101L University Chemistry I Lab |
| | 4 MATH 2554 Calculus I |
| | 2 GNEG 1122 Introduction CAD |
| | 3 MEEG 1103 Intro. to Mechanical Engineering |
| | 16 semester hours |
| Spring Semester 1 | 3 CHEM 1123 University Chemistry II |
| | 1 CHEM 1121L University Chemistry II Lab |
| | 4 MATH 2564 Calculus II |
| | 4 PHYS 2054 University Physics I |
| | 0 PHYS 2050L University Physics I Lab |
| | 3 ENGL 1023 Technical Composition II |
| | 15 semester hours |
| Fall Semester 2 | 4 PHYS 2074 University Physics II |
| | 0 PHYS 2070L University Physics II Lab |
| | 4 MATH 2574 Calculus III |
| | 3 MEEG 2303 Intro. to Materials |
| | 3 MEEG 2003 Statics |
| | 14 semester hours |
| Spring Semester 2 | 4 MATH 3404 Differential Equations |
| | 3 MEEG 2013 Dynamics |
| | 3 MEEG 2403 Thermodynamics |
| | 3 MEEG 2703 Computer Methods in Mechanical Engineering |
| | 3 ELEG 3903 Electric Circuits and Machines |
| | 16 semester hours |
| Fall Semester 3 | 3 MEEG 3013 Mechanics of Materials |
| | 3 MEEG 3113 Machine Dynamics & Control |
| | 2 MEEG 3202 Mechanical Engr Lab I |
| | 3 MEEG 3503 Mechanics of Fluids |
| | 3 ELEG 3913 Engineering Electronics |
| | 3 Humanities/social science elective |
| | (History or Gov. Requirement) |
| | 17 semester hours |
| Spring Semester 3 | 2 MEEG 3212 Mechanical Engr Lab II |
| | 3 MEEG 4413 Heat Transfer |
| | 3 MEEG 4103 Machine Element Design |
| | 3 ECON 2143 or ECON 2013 |
| | 3 Humanities/social science elective (lower-level) |
| | 0 ENGL 2003 Advanced Composition or Exemption |
| | 14 semester hours |
| Fall Semester 4 | 3 MEEG 4033 Creative Project Design I |
| | 2 MEEG 4202 Mechanical Engr Lab III |
| | 3 MEEG 4483 Thermal Systems Analysis & Design |
| | 3 Technical/science elective |
| | 3 Technical/science elective |
| | 3 Humanities/social science elective (3000 - 4000 level) |
| | 17 semester hours |
| Spring Semester 4 | 3 MEEG 4133 Creative Project Design II |
| | 3 Technical/science elective |
| | 3 Technical/science elective |
| | 3 Humanities/social science elective (lower level) |
| | 3 Humanities/social science elective (3000-4000-level) |
| | 15 semester hours |

**124 Total hours**
Technical/Science Electives

The purpose of technical/science electives is to provide students with the opportunity to expand their education along lines of particular interest to them. The approved list of technical/science electives and selected courses for various options is available in the Mechanical Engineering department office.

Humanities/Social Science Electives

Any elective included on the humanities/social science list may be selected. This list is available in the department office.

SEE PAGE 381 FOR MECHANICAL ENGINEERING (MEEG) COURSES
MISSION AND OBJECTIVES

The primary goal of the University of Arkansas School of Law is to prepare lawyers who will render high-quality professional service to their clients, who are interested in and capable of advancing legal progress and reform, and who are prepared to be leaders in their communities. These objectives can best be realized by a competent and dedicated full-time faculty working in partnership with an interested and involved bench and bar. The faculty and administrative staff at the School of Law strive to maintain mutually beneficial relationships with judges and practicing lawyers. Appellate courts regularly schedule cases at the School of Law, and the judges meet with students informally after the arguments. Full-time faculty members teach first-year courses and other required substantive law courses, while practice skill courses such as legal clinic and activities such as moot court and client counseling depend on the assistance of the practicing bar.

The University of Arkansas School of Law also has a strong sense of responsibility to the people of Arkansas. Members of the faculty and student body are active in numerous public service activities. Legal counsel to the indigent is provided through the clinical education program and by special court appointments from time to time. Students and faculty also serve on the bar, in civic and legislative committees, and on task forces. A number of faculty and students contribute time and expertise to state agencies and law reform groups. All of these activities offer students real legal work, serving the people of Arkansas.

Teaching Methods

Legal training teaches principles through discussion and skills through practice. The student must be, by definition, an active participant in that process.

The Socratic “case method” is the basic tool of traditional American legal education. This method involves the study and discussion of litigated cases. The teacher calls upon students to respond in a stimulating question-and-answer dialogue, frequently involving several class members and often including more questions than answers. The learning experience occurs not only in the interchange between teacher and student, but also among the students themselves. This process, applied skillfully by expert teachers and by students possessing a sense of awareness and curiosity, hones the minds of students, develops their respect for facts, and creates a sensitivity to essential differences among issues, policies, reasons, and arguments. Intensive and consistent daily preparation is necessary for students to participate effectively in this process.

In some of the first-year courses, and in many later courses, students are given practical legal problems to solve. These problems
may involve drafting legal documents or formulating a course of action for a hypothetical client.

By the time students reach their third years, they will be prepared to engage in significant legal research in selected areas of specialization. A primary source for such experience will be seminars taught informally in small groups by professors who are experts in selected subjects. Frequently, a student will be expected to defend a seminar paper before classmates under circumstances that provide lively and constructive discussion. During the second and third years, students are also permitted to engage in research and writing projects for credit under the supervision and consultation of a selected faculty member, in an area of particular interest to the student.

Of increasing importance in legal education is the role of practical, on-the-job training involving legal problems of actual clients. Legal clinic courses provide valuable client counseling experience, as well as participation in actual trials and appeals under the supervision of a member of the faculty who is also a licensed attorney.

The clinic has offices in the Law Programs Center. Representation is provided for students and indigent local residents. Both civil and certain referred criminal cases are accepted by the clinic. In addition, the School of Law plans to offer students the opportunity to participate in a mediation clinic, and has plans for both a transactional and an appellate practice clinic for 2005-06.

Many classes in the School of Law involve a significant skills component in which students are placed in a simulated client-based situation and asked to respond appropriately. The curriculum includes a number of specially designated-skills classes that focus on practice skills. All law students are required to take at least one skills class prior to graduation.

FACILITIES AND RESOURCES

The Robert A. Lefflar Law Center is currently under expansion and the new addition is expected to be completed by the fall of 2006. The expanded facilities will include a new entry hall facing the student Union and Mullins library, a two-story lobby, the Six Pioneers Room named in honor of the first six African American law students to be admitted to the School of Law, and four state-of-the-art classrooms on the third floor, which will be connected to the existing classroom wing. The smallest classroom will be adjacent to three small breakout rooms where simulation exercises can take place and be observed by our faculty members.

Robert A. and Vivian Young Law Library

The Robert A. and Vivian Young Law Library contains more than a quarter million volumes, including cases and statutes from every American jurisdiction. The law library also contains a current and complete collection of legal encyclopedia, digests, tests, treatises, law reviews, reports of administrative agencies, and other government publications.

The Young Law Library is a depository for federal, state, and United Nations documents. It is the only U.N. documents library in the state and one of a few in the Midwest. The library includes a growing collection of agricultural law materials developed with assistance from the National Agricultural Law Center.

Students researching legal problems use traditional printed resources and electronic resources available across the Internet. Portals such as Loislaw.com, LEXIS, WESTLAW, the State of Arkansas Web page, the National Agriculture Law Center Web page, and the Young Law Library’s Web page help students identify and use appropriate resources. Computer labs are available for student use. The School of Law also has a wireless network accessible to all students, faculty, and staff.

While primarily designed for the use of Arkansas students, the Young Law Library also serves the research needs of the bench, the bar, and the University community. The Young Law Library provides an attractive and comfortable atmosphere for study and research. Included within the Young Law Library is the Barrett Hamilton Law Library Mezzanine, a particularly attractive study and shelf space area. In addition, the main campus library, Mullins Library, is located near the Young Law Library. The two libraries work closely together to identify, acquire, and share resources throughout the campus.

Law Faculty

- Distinguished Professors Killenbeck (M.) and Laurence
- University Professor Brill
- Professors Bailey, Beard, Brummer, Ewelukwa, Flaccus, Goforth, Guzman, Judges, Kilpatrick, Leflar, Matthews, Moberly, Mullane, Nance, Norvell, Schneider, Seligmann, and Sheppard
- Research Associate Professor Roberts
- Associate Professor Kelley
- Clinical Associate Professors Baker, Coats, Foster, Killenbeck (A.), Sampson, and Tarvin
- Assistant Professor Circo
- Research Assistant Professors Pittman and O’Brien

OTHER PROGRAMS

Joint J.D./M.B.A. Program (Business Administration)

The School of Law and the Sam M. Walton College of Business offer students a juris doctor (J.D.) degree and a master’s of business administration (M.B.A.) degree concurrently. Students working to pursue their degrees in this joint program must gain admission to both the School of Law and the Graduate School and be accepted into the program of study leading to the M.B.A. degree. If the student is accepted into both programs, a maximum of six hours of approved upper-level elective law courses may be used as duplicate credit toward the M.B.A. degree and a maximum of six hours of approved graduate courses in business administration may be used as duplicate credit toward the J.D. degree, thus reducing the total time necessary for completion of the degrees.

Joint J.D./M.P.A. Program (Public Administration)

The department of political science, the Graduate School, and the School of Law cooperate in a dual-degree program that allows a student to pursue a juris doctor (J.D.) degree and a master’s of public administration (M.P.A.) degree concurrently. Students must be admitted to the M.P.A. program, the School of Law, and the dual-degree program. If students enter the dual-degree program after enrolling in either the School of Law or the M.P.A. program, they must obtain admission to the other degree program and the dual-degree program during the first year of study.

The School of Law accepts a maximum of nine hours of M.P.A. courses to satisfy requirements for the J.D. degree. To qualify for J.D. credit, the M.P.A. courses must come from a set of core courses and must be approved by the School of Law. For purposes of the M.P.A. degree, 15 hours of elective courses may be taken in the School of Law, provided they are in an area of concentration approved by the director of the M.P.A. program. Students must earn a grade of B or higher in any M.P.A. course offered for credit toward the J.D.

Students admitted to the dual-degree program may commence their studies in either the School of Law or in the M.P.A. program but must complete first year course requirements before taking courses in the other degree program. If they do not maintain the academic or ethical standards of either degree program, students may be terminated from the dual degree program. Students in good standing...
in one degree program but not the other may be allowed to continue in the program in which they have good standing and must meet the degree requirements of that program. If for any reason a student admitted to the dual degree program does not complete the M.P.A. degree, he or she cannot count any hours of M.P.A. courses toward the J.D. degree. Likewise, M.P.A. students may not be able to count certain law courses if they decide to discontinue their studies in the School of Law. The J.D. degree will be awarded upon completion of all degree requirements; the M.P.A. will be awarded upon completion of the comprehensive examination and the internship (and internship report), or alternately, six hours of additional coursework.

Joint J.D./M.A. Program

The School of Law and the Department of Political Science provide a dual J.D./M.A. in International Law and Politics. This program’s students must be admitted both to the School of Law and the Graduate School in the Department of Political Science. A maximum of 12 hours of approved, upper-level elective law courses may be used as credit toward the M.A. and a maximum of nine hours of approved graduate courses in political science may be used as credit toward the J.D. degree., reducing the time necessary to complete both degrees by about one academic year. The M.A. program offers a six-hour thesis or a paid, six-month internship option designed to prepare students for a career in international politics or law. The 12 hours of M.A. courses taken in the School of Law must relate to the study of international law and be approved by the student’s M.A. adviser and the Law School’s Associate Dean of Academic Affairs. The nine hours of approved graduate courses in political science may include: Comparative Political Analysis; Seminar in International Politics; Seminar in Contemporary Problems; International Political Economy; and International Trade Policy. Other political science and graduate-level courses may be taken by permission. Paid internship credits cannot be applied toward the juris doctorate.

SCHOOL ADMISSION REQUIREMENTS

For complete details concerning admission to the School of Law, visit us at http://law.uark.edu/admissions/admissions.html or write to School of Law Office of Admissions, Leflar Law Center, University of Arkansas, Fayetteville, AR 72701, or telephone 479-575-3102 for a University of Arkansas School of Law Catalog of Studies.

General Information

Except for students in the “3/3 Programs,” applicants must have completed all requirements for a bachelor’s degree from an accredited institution prior to enrolling in the School of Law. All applicants must take the Law School Admission Test (LSAT) administered by Law School Admission Services. Admission of most students is based on applicants’ undergraduate grade-point averages and LSAT test scores. However, the School of Law also seeks a diverse student body with a broad set of backgrounds, interests, life experiences, perspectives, qualifications, and career objectives. In selecting a small percentage of applicants, therefore, the admissions committee may consider a number of factors relevant to a determination of how the applicant might contribute to such diversity within the School of Law.

There is no predetermined satisfactory grade-point average or law school admission test score. Admission is on a selective basis.

While admissions personnel are happy to answer any questions that applicants may have, the interview as a device for the applicant to “sell” themselves is not a part of the admissions process. The admissions committee works only with the written materials in an applicant’s file.

LSAT

The Law School Admission Test (LSAT) is given four times a year in Fayetteville and at other locations throughout Arkansas and in other states. Arrangements may be made online at www.lsac.org or by writing to Law School Admission Council, 662 Penn Street, Box 2000, Newtown, PA 18940-0998. Applicants for admission are urged to take the test at least nine months prior to expected entrance to law school.

LSDAS

The University of Arkansas participates in the Law School Data Assembly Service (LSDAS). The LSAT/LSDAS registration packet may be obtained online at http://www.lsac.org or by writing directly to Law School Admission Council, 662 Penn St., Box 2000, Newtown, PA 18940-0998. The packet includes instructions for providing transcripts of scholastic work for analysis by the LSDAS. The applicant should see that the LSAT score and LSDAS reports are sent to this school.

Pre-Law Study

No pre-law curriculum is prescribed at the University of Arkansas School of Law or at any other American law school. Experience has shown that students do equally well in law school and in law practice regardless of their differing educational backgrounds. As a result, no single “pre-law major” is required or even recommended. Students in a position to structure their college curricula should select courses that emphasize analytical and problem-solving skills and courses in which written work is vigorously edited. Arkansas admits applicants from a wide variety of college majors. The resulting diversity enhances and enriches the educational experience of all students.

The Admission Process

The University of Arkansas School of Law admits one beginning class in August of each year. Applications for admission may be completed online at http://law.uark.edu or can be obtained from the Office of Admissions, University of Arkansas School of Law, Leflar Law Center, Fayetteville, AR 72701.

Applications should be completed as early as possible. While applications are considered as long as there are openings in the entering class, few applications arriving after April 1 receive favorable action. The admission process at Arkansas is a continuing one. As test reports and scores are received, admission decisions are made. It is impossible to give a final decision on some applicants until late spring.

An applicant whose admission has been approved will receive a tentative admission notice. The applicant will be required to deposit a $75 pre-registration fee. This fee is non-refundable but is applied to the regular registration fee when the student registers.

Other Admission Information

Persons who have attended other law schools should not follow the above procedure but should apply to the Associate Dean for Students at the School of Law as a transfer student, indicating previous attendance at another school. Failure to indicate such attendance will automatically void a tentative admission granted to such person.

A student may not register in the School of Law for any course without first complying with all admission requirements for regular law students. Undergraduate students not currently admitted to the School of Law may enroll for a course with special permission, but the credits will not count toward a J.D. degree.
Transfer Students

A law student who has received a degree from an approved college and thereafter has completed work with satisfactory scholarship in a law school accredited by the American Bar Association is eligible to be considered for transfer to the University of Arkansas School of Law. The amount of transfer credit to be granted will depend upon the quality of performance and the relation of completed courses to the program of this school. Only credits or units (not grades) are transferable in any case, and even credits will not be accepted for any course or other work in which a grade below 2.0 or the equivalent has been given from the other law school. To qualify for a degree, the student must comply with the American Bar Association’s residency requirements, which require attendance at this Law School for at least 60 credit hours.

Failure to disclose attendance at another college or law school, expulsion, suspension, academic or other probation, or any pending matters relating to misconduct or dishonesty at another school is sufficient grounds to require withdrawal.

Visiting Students

A student in good standing at another fully accredited law school may apply for admission as a visiting student. Enrollment restrictions may limit class selection, and visiting students are not eligible to receive degrees from the School of Law.

3/3 Programs

The School of Law and the J. William Fulbright College of Arts and Sciences have collaborated in developing a program that will enable outstanding students to enter the School of Law after their third year of undergraduate studies. A student enrolled in the Fulbright College is eligible to begin study in the UA School of Law after the completion of at least 94 hours of college work if the following criteria are met:

1. Completion of all University, college, and major course requirements for their undergraduate degrees;
2. A cumulative grade-point average of at least 3.50; and
3. A score of at least 159 on the LSAT.

Such students will receive a Bachelor of Arts or a Bachelor of Science after the completion of sufficient hours at the School of Law in order to meet the regular requirements of Fulbright College. These students will then receive a juris doctor (J.D.) degree after completing the required number of hours at the School of Law.

In addition to the 3/3 program with the J. William Fulbright College of Arts and Sciences, the School of Law has a similar program with the department of agricultural economics and agribusiness in the Dale Bumpers College of Agricultural, Food, and Life Sciences. Exceptional students may enroll in the Law School in their fourth year of undergraduate study. Students will be required to have (1) completed at least 95 credit hours in the pre-law program, (2) a cumulative grade-point average in all college or University course work of at least 3.50 without grade renewal, and (3) an LSAT score of at least 159. The B.S.A. Agricultural Business degree will be granted after successfully completing 29 credit hours from the first-year School of Law course work.

It is a requirement of the School of Law’s accreditation standards that no student be admitted to the University of Arkansas School of Law until they have completed at least three-fourths of the work necessary for the baccalaureate degree. The requirements embodied in these 3/3 programs satisfy this requirement.

COLLEGE SCHOLARSHIPS

Students are expected to make sufficient financial arrangements for the first year of study without the necessity of seeking employment. All law students are required to be full-time students, and no law student is permitted more than 20 hours per week of employment. First-year students are strongly discouraged from working while enrolled in classes. First-year students are expected to adhere to a standard curriculum; some courses in the upper-division curriculum are also required.

Applications for financial aid may be obtained from the Office of Financial Aid, University of Arkansas, Hunt Hall 114, Fayetteville, AR 72701, 479-575-3806. You may also find more information about financial aid opportunities online at http://www.uark.edu/admin/fininfo/index.html. Applications for financial aid must be submitted to the Office of Financial Aid by April 1. Specific fees and costs are listed in the School of Law Catalog.

DEGREE REQUIREMENTS

For course information and degree requirements, see the School of Law Catalog online at http://law.uark.edu or by writing or calling the University of Arkansas School of Law, Leflar Law Center, Waterman Hall 147, Fayetteville, AR 72701, 479-575-3102.

GRADUATE STUDIES

The University of Arkansas School of Law is a professional degree program. In addition to the law degree, the Law School offers a graduate degree in agricultural law. The Graduate Program in Agricultural Law at the University of Arkansas is the only program in the United States that offers a Master of Laws (LL.M.) degree in agricultural law. Students enrolled in this unique and selective program have the opportunity for advanced study, creative research, and specialized professional training in the legal issues involved with agricultural production, marketing, and distribution. Graduates of the program are among the leaders of today’s agricultural law community, working in private practice, government, agribusiness, public policy, and academia. For more information, visit http://law.uark.edu/lhm/.

ACCREDITATIONS

The degree programs in the School of Law on the Fayetteville campus are accredited by both the American Bar Association and the Association of American Law Schools.
Reserve Officer Training Corps

The Reserve Officer Training Corps (ROTC) programs at the University of Arkansas provide physical and mental challenges that are not offered anywhere else on campus. The ROTC programs prepare young men and women for careers as professional military officers. In addition to academic studies, each service requires that all students attend a weekly leadership laboratory.

The freshman and sophomore courses are electives offered to male and female students who may earn four hours of academic credit in Aerospace Studies or up to six hours in Military Science. Absolutely no military obligation is incurred by non-scholarship students as a result of their enrollment in or completion of any or all of their freshman or sophomore ROTC courses.

U. S. AIR FORCE ROTC

In addition to the first two years of academic study (see above), the University, in cooperation with the U.S. Air Force, offers two years of advanced instruction in Aerospace Studies. The advanced instruction prepares students for the responsibilities and privileges of a commissioned officer. This advanced instruction offers three hours of academic credit per semester for Air Force cadets.

Air Force ROTC cadets must attend and successfully complete field training. Air Force ROTC cadets usually attend field training between their sophomore and junior years. Air Force ROTC cadets enrolled in the full four-year program attend a four-week session, whereas students entering the two-year program attend a six-week session. Air Force ROTC cadets may volunteer to attend light aircraft training, parachutist training, or various other professional development courses.

Students pursuing technical majors, with a minimum of two academic years remaining in school (undergraduate, graduate, or a combination of the two), may apply to enter an alternate two-year program. Students selected to enter the two-year ROTC program must attend a six-week field training orientation during the summer prior to their last two years of college or between their junior and senior years. The student must successfully complete the summer field training to qualify for the advanced ROTC program. All veterans who have completed basic training and 180 days of service with any component of the U.S. Armed Forces may receive full credit for the freshman and sophomore courses and may enter ROTC at the advanced level when junior academic standing has been achieved.

Financial assistance is also available in the form of monthly stipends for cadets officially enrolled in the advanced training program, who have successfully completed summer field training. Additionally, Air Force ROTC offers four-, three-, and two-year scholarships to competitively selected students. All scholarship students

Air Force ROTC
319 Memorial Hall
479-575-3651/3652
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Professor of Aerospace Studies
Lt. Col. Lionel S. Mellott

World Wide Web
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Army ROTC
207 Army ROTC Building
479-575-4251/5853
Toll Free: 1-866-891-5538
Fax: 479-575-5855
E-mail: armyrotc@cavern.uark.edu

Professor of Military Science and Leadership
LTC William H. Land III

World Wide Web:
http://www.uark.edu/armyhog/
receive a monthly tax-free allowance ranging from $250 to $400, payment of all tuition expenses, textbook payment, and payment of certain other fees. Additional information and applications for this assistance may be obtained on the Web at http://www.afrotc.com/. Engineering and nursing students are highly encouraged to apply.

A student who successfully completes the Advanced Course in Air Force ROTC and receives a degree will be awarded a reserve commission and will serve on active duty in the U. S. Air Force.

All textbooks, instructional material, and equipment required for ROTC courses are furnished at no cost to the student.

SEE PAGE 311 FOR U.S. AIR FORCE ROTC (AERO) COURSES

U. S. ARMY ROTC

In addition to the first two years of academic study, the University, in cooperation with the U.S. Army, offers two years of advanced instruction in Military Science, Leadership, Ethics, and Personal Confidence. The advanced instruction prepares students for the responsibilities and privileges of a commissioned officer. This advanced instruction offers four hours of academic credit per semester for Army cadets. Additionally, all students enrolled in the final two years of ROTC receive a monthly tax-free allowance ranging from $350 to $500.

Army ROTC cadets attend a paid 33-day Leadership Development and Assessment Course (LDAC) between their junior and senior school years. Cadets may attend professional development training such as Leadership Internships, Airborne, Air Assault, British Exchange program, Northern Warfare, Nurse Summer Training Program, and Mountain Warfare. During summer field training, cadets receive room and board.

For students having a minimum of two academic years in school remaining (undergraduate, graduate, or a combination of the two), an alternate two-year program is offered. Students entering the two-year ROTC program attend a 28-day Leaders Training Course (LTC) during the summer. Rising juniors, seniors, and graduate students who meet the U.S. Army Cadet Command’s Scholar-Athlete-Leader criteria and are unable to attend the LTC may elect to participate in the Accelerated Cadet Commissioning Training (ACCT) program conducted on the UA campus.

Students with high school-level military schooling (ROTC, NDCC, or Military Academy) may qualify for the advanced ROTC program without completing the freshman or sophomore courses. All veterans who have completed basic training and 180 days of service with any component of the U.S. Armed Forces can receive full credit for the freshman and sophomore courses and may enter ROTC at the advanced level, once junior academic standing has been achieved.

Financial assistance is also available to qualified students enrolled in ROTC courses. The Army offers two, two-and-one-half, three, three-and-one-half, and four-year scholarships. Freshman or sophomore students who are not enrolled in Army ROTC may qualify for on-campus two or three-year scholarships. Juniors, seniors, and graduate students who have at least two full years of college remaining may also qualify for on-campus two or three-year scholarships. Scholarships can be used to pay for graduate school. Scholarship students receive a monthly tax-free allowance ranging from $350 to $500, payment of all tuition expenses, textbook payment ($900 per year), and payment of certain other fees. Additionally, all qualified three and four-year scholarship winners may receive free room and board, provided they meet the University of Arkansas requirements for the Room and Board Scholarship.

Army ROTC scholarship and advanced course students must agree to successfully complete at least one semester of American military history, LDAC, and a Staff Ride (Terrain Walk) prior to commissioning. Depending on the degree plan, Army ROTC may count from zero to 19 hours of elective credits for undergraduate students.

Army ROTC also offers a unique financial assistance program available to all non-scholarship Army ROTC Advanced Course students through the Simultaneous Membership Program (SMP). This program allows students with 27 or more hours to be enrolled in Army ROTC while simultaneously serving with an Army Reserve or Army National Guard unit. Financial benefits of this program presently provide approximately $600 to $1,200 per month to enrolled students. Prior Service National Guard and Army Reserve students may also qualify for the Montgomery G.I. Bill, MGIB Kicker, the Veterans Administration Workstudy Program, Federal Tuition Assistance, and/or the Arkansas Army National Guard Tuition Assistance Program. Army ROTC Scholarship Nurse Cadets may also receive reimbursement for expenses related to Nursing Uniforms, Immunizations, Clinical Fees, Nursing Malpractice Insurance and the NCLX-RN review and testing.

A student who successfully completes the Advanced Course in the Army ROTC program and receives a degree may be accepted for a regular or reserve commission in one of the sixteen branches of the Army.

All textbooks, instructional material, and equipment required for ROTC courses are furnished at no cost to freshmen and sophomore students. Junior and senior Army ROTC students must purchase textbooks only. All other equipment and materials will be furnished at no cost.

SEE PAGE 384 FOR U.S. ARMY ROTC (MILS) COURSES
University Faculty

The first date after the listing of each name indicates the year of first appointment at the University; the second date indicates the year of appointment to present faculty rank. Where they coincide, only one date is given.

Ackerson, Michael Dean – B.S.Ch.E., M.S.Ch.E. (University of Missouri-Rolla), Ph.D. (University of Arkansas), P.E., Associate Professor of Chemical Engineering, 1988, 1992.


Adkins, Jr., Charles W. – B.S. (University of Central Arkansas), L.E. (U.S. Army Logistics Management College), Major (U.S. Army, Quartermaster Corps), Assistant Professor of Military Science and Leadership, 2001.

Adler, Jacob – A.B., Ph.D. (Harvard University), Associate Professor of Philosophy, 1984, 1991.

Ahrendsen, Bruce L. – B.S. (Iowa State University), M.Econ., Ph.D. (North Carolina State University), Associate Professor of Agricultural Economics and Agribusiness, 1990, 1996.


Alexander, Jerry W. – B.A. (Texas Tech University), Visiting Assistant Professor of Operations Management, 2002.

Allen, Carolyn Henderson – B.S. (Alabama State University), M.S. (Clark Atlanta University), Professor and Dean of University Libraries, 2000.


Allison, Neil T. – B.S. (Georgia College), Ph.D. (University of Florida), Associate Professor of Chemistry and Biochemistry, 1980, 1985.


Amason, Patricia – B.S.E. (University of Arkansas), M.A. (University of Kentucky), Ph.D. (Purdue University), Associate Professor of Communication, 1994, 2000.


Anders, Merle M. – B.S. (Iowa State University of Science and Technology), M.S., Ph.D. (University of Hawaii), Research Assistant Professor of Rice Cropping Systems, 1998.

Andersen, Craig R. – B.S. (Augustana College), M.S., Ph.D. (University of Minnesota), Research Associate Professor of Horticulture, 1985, 1995.


Ang, Simon S. – B.S.E.E. (University of Arkansas), M.S.E.E. (Georgia Institute of Technology), Ph.D. (Southern Methodist University), P.E., Professor of Electrical Engineering, 1988, 1995; Adjunct Professor of Biological and Agricultural Engineering, 2003.

Anthony, Nicholas B. – B.S., M.S. (Ohio State University), Ph.D. (Virginia Polytechnic Institute and State University), Professor of Poultry Science, 1987, 2000.

Antoine, Pierre Ph. – B.S. (University of Louvain, Belgium), Ph.D. (University of Minnesota), Adjunct Professor of Agronomy, 1987.


Apple, Jason K. – B.S. (Oklahoma State University), M.S., Ph.D. (Kansas State University), Associate Professor of Animal Science, 1995, 2001.

Apple, Laurie M. – B.S., M.S. (University of Arkansas), Ph.D. (Oklahoma State University), Assistant Professor of Human Environmental Sciences, 2000, 2001.

Arenberg, Nancy – B.A. (Grinnell College), M.A. (University of Illinois, Champaign-Urbana), Ph.D. (University of Arizona, Tucson), Associate Professor of Foreign Languages, 1996, 2002.

Armstrong, Deborah J. – B.A. (California State University), M.B.A. (Avalia College), Ph.D. (University of Kansas), Assistant Professor of Information Systems, 2001.


Arnold, Mark E. – B.S., Ph.D. (Northern Illinois University), Associate Professor of Mathematical Sciences, 1993, 1999.

Ashton, Dub – B.S.B.A., M.B.A. (Memphis State University), Ph.D. (University of Georgia), Associate Professor of Marketing and Logistics, 1981.


Awika, Joseph – B.S. (Egerton University, Kenya), M.S., Ph.D. (Texas A&M University) Adjunct Assistant Professor of Food Science, 2005.


Bacon, Robert K. – B.S.A., M.S. (University of Arkansas), Ph.D. (Purdue University), Professor of Crop, Soil, and Environmental Sciences, 1984, 1993.

Bailey, Alberta S. – B.A. (Miles College), M.S.L.S. (Case Western Reserve University), Professor and Librarian, 1979, 1989.

Bailey, Carlton – B.A. (Tallahadega College), J.D. (University of Chicago), Associate Professor of Law, 1978, 1983.


Baird, Douglas H. – D.V.M. (Louisiana State University), Adjunct Assistant Professor of Animal Science, 2002.

Bajwa, Sreekala G. – B.S., M.S. (East Caroline University), Ph.D. (University of Arkansas), Instructor in Plant Science, 1999.


Beavers, Gordon – B.S., M.S. (University of Texas), Ph.D. (Indiana University), Associate Professor of Computer Science and Computer Engineering, 2002.


Beavers, Gordon – B.S., M.S. (University of Wisconsin), Ph.D. (University of Pennsylvania), Associate Professor of Biological Sciences, 1995, 2001.


Betts, Robert R. – B.S.Ch.E., M.S.Ch.E., Ph.D. (University of Pittsburgh), P.E., Associate Professor of Chemical Engineering, Adjunct Associate Professor of Biological and Agricultural Engineering, 1993, 1998.

Belt, Steven M. – B.A. (University of Kansas), M.A. (University of Kentucky), Ph.D. (University of Kansas), Associate Professor of Foreign Languages, 1992, 1996.

Bellaiche, Laurent – B.S., M.S., Ph.D. (University of Paris VI, France), Associate Professor of Physics, 1999, 2003.


Bench, James C. – B.S. (Bellevue University), Assistant Professor of Aerospace Studies, 2004.

Berger, J. M. – B.A. (Florida Atlantic University), M.S. (University of Louisiana at Lafayette), Ph.D. (Florida Atlantic University), Assistant Professor of Psychology, 2002.

Bernard, Lori A. – B.S. (The Ohio State University), M.A. (Cleveland State University), Ph.D. (University of California, Davis), Assistant Professor of Foreign Languages, 2004.

Bernhardt, John L. – B.S., M.S. (East Caroline University), Ph.D. (Clemson University), Research Associate of Rice Insects, 1979.

Berthelot, Ronald J. – B.S. (Southeastern Louisiana University), M.S., Ed.D (University of Tennessee), Visiting Assistant Professor of Operations Management, 1993.


Blackwell, Marion M. – B.Arch (Auburn University), M.Arch (Syracuse University), Professor of Architecture, 1992, 2002.

Bleakley, Gage A. – B.A. (South Carolina State University), M.S. (Air Force Institute of Technology), Professor of Aerospace Studies, 2004.

Bobbitt, Donald R. – B.S. (University of Arkansas), Ph.D. (Iowa State University), Professor of Chemistry and Biochemistry, 1985, 1993.

Bonacci, Jeffrey A. – B.S. (University of Akron), M.S. (West Virginia University), D.A. (Middle Tennessee State University), Clinical Assistant Professor of Kinesiology, 2000.

Bonanno, F. Ramon – B.S. (U.S. Military Academy), M.S. (Iowa State University), Ph.D. (University of Arizona), Visiting Assistant Professor of Operations Management, 1994.


Boss, Stephen K. – B.S. (Bemidji State University), M.S. (Utah State University), Ph.D. (University of North Carolina, Chapel Hill), Associate Professor of Geology, 1996, 2002.


Bourland, Fred M. – B.S.A., M.S. (University of Arkansas), Ph.D. (Texas A&M University), Professor of Crop, Soil, and Environmental Sciences at Northeast Research and Extension Center, 1988.


Boyer, Mark E. – B.S. in Landscape Architecture (University of Kentucky), M. in Landscape Architecture (Louisiana State University), Associate Professor of Landscape Architecture, 1998, 2004.

Brady, Pamela L. – B.S., M.S. (University of Arkansas), Ph.D. (University of Tennessee), Adjunct Professor of Food Science, 1999.

Brady, Robert M. – B.S. (Murray State University), M.A. (Western Kentucky University), Ph.D. (University of Michigan), Associate Professor of Communication, 1979, 1985.

Brahana, John Van – A.B. (University of Illinois), M.A., Ph.D. (University of Missouri), Professor of Geosciences (Geology), 1999.


Brazzell, Johnetta – B.A. (Spelman College), M.A. (University of Chicago), Ph.D. (University of Michigan), Adjunct Associate Professor of Higher Education, 2002.

Breeding, Steve – B.S., M.S., D.M.V. (North Carolina State University), Adjunct Assistant Professor of Poultry Science, 1998.

Brescia, William F., Jr. – B.A. (Wartburg College), M.S. (University of Wisconsin), Ph.D. (Indiana University), Assistant Professor of Educational Technology, 2000.

Brewer, Dennis W. – B.A. (Sterling College), M.A., Ph.D. (University of Wisconsin), Professor of Mathematical Sciences, 1975, 1990.


Brister, Roy – B.S., M.S., Ph.D. (Texas A&M University), Adjunct Professor of Poultry Science, 1994.


Broggi, Alessandro – B.A. (University of Florence, Italy), M.A. (Ohio University), Ph.D. (University of Florence, Italy), Ph.D. (Ohio University), Assistant Professor of History, 2002.


Brown, Arthur V. – B.S., M.A. (Sam Houston State University), Ph.D. (North Texas State University), Associate Professor of Biological Sciences, 1974, 1981.

Brown, Michael A. – B.S., M.S., Ph.D. (Oklahoma State University), Adjunct Professor of Animal Science, 1998.


Broyles, John F. – B.S. (Georgia Institute of Technology), Professor of Kinesiology, 1970.


Bryant, Kelly J. – B.S., M.S. (University of Arkansas), Ph.D. (Texas A&M), Adjunct Associate Professor of Agricultural Economics and Agribusiness, 1993, 2000.
Brye, Kristofer R. – B.S. (University of Wisconsin – Stevens Point), M.S., Ph.D. (University of Wisconsin – Madison), Associate Professor of Crop, Soil and Environmental Sciences, 2001, 2005.

Buescher, Ronald W. – B.S., M.S., Ph.D. (Purdue University), Professor of Food Science, 1973, 1981.

Buffington, Jack E. – B.S.C.E. (University of Arkansas), M.S.C.E. (Georgia Tech University), Research Professor of Civil Engineering, 1996.


Burch, George V. – B.S. (Southwest Missouri State University), M.S., Ed.D. (University of Arkansas), Adjunct Assistant Professor of Agricultural and Extension Education, 1993.


Burkett, Susan – B.S.E.E., M.S.E.E., Ph.D. (University of Missouri, Columbia), Associate Professor of Electrical Engineering, 2003.

Caldwell, Joseph G. – B.S. (University of Southwest Louisiana), M.S. (Louisiana State University), M.S. (University of Central Arkansas), Ph.D. (Louisiana State University), Adjunct Professor of Entomology, 1982, 1992.

Buron, Bill – B.S.N. (Southwest Missouri State University), M.S.N. (University of Missouri, Kansas City), Instructor of Nursing, 2000.


Bushkuhl, John Francis – B.S.Ch.E. (University of Arkansas), Visiting Instructor in Chemical Engineering, 1994.

Buyurgan, Nebi – B.S. (Istanbul Technical University), M.S., Ph.D. (University of Missouri-Rolla), Assistant Professor of Industrial Engineering, 2004.


Caldwell, Charles W. – B.S.E.E., M.S.E.E. (University of California), Ph.D. (Case Western Reserve University), P.E., Associate Professor of Electrical Engineering, 1972, 1977.

Callahan, Carolyn M. – B.S. (Ohio Northern University), M.S. (Bowling Green State University), Ph.D. (Michigan State University), Professor of Accounting and Doris M. Cook Chair in Accounting, 2001.

Callegano, Paul – B.S. (San Jose State University), M.S., Ph.D. (University of Arkansas), 2005.


Cantrell, Chyrle – B.S. (California State University), M.S. (San Diego State University), Ph.D. (University of Northern Colorado), Assistant Clinical Professor, 2002.

Capogna, Luca – B.S. (Second University of Rome), Ph.D. (Purdue University), Associate Professor of Mathematical Sciences, 1999, 2003.

Capps, Matthew – B.S., M.Ed. (Midwestern State University), Ed.D. (Texas A&M University), Assistant Professor of Educational Administration, 2004.

Carder, Sarah – B.S.E., M.S.E. (Henderson State University), Ed.D. (University of Arkansas), Visiting Assistant Professor of Vocational and Adult Education, 1995.


Carpenter, Dale – B.A. (Vanderbilt University), M.A. (Emory University), Associate Professor of Journalism, 1994, 2000.

Carrier, Danielle J. – B.S., M.S., Ph.D. (McGill University, Canada), Associate Professor of Biological and Agricultural Engineering, 2000.

Cartwright, D. Kelly – B.S.A., M.S. (University of Arkansas), Ph.D. (North Carolina State University), Adjunct Assistant Professor of Plant Pathology, 2004.


Casana, Jesse – B.A. (University of Texas, Austin), M.A., Ph.D. (University of Chicago), Assistant Professor of Anthropology, 2004.


Cavell, T. A. – B.A. (Louisiana State University), M.S. (Texas A & M University), Ph.D. (Louisiana State University), Professor of Psychology, 2002.


Chappell, David L. – B.A. (Yale University), Ph.D. (University of Rochester), Associate Professor of History, 1992, 1998.

Chaube, Indrajeet – B.Tech (Agricultural Engineering, University of Allahabad, India), M.S.B.A.E. (University of Arkansas), Ph.D. (Oklahoma State University), Associate Professor of Biological and Agricultural Engineering, 2000, 2005.

Chen, Pengyin – B.S. (Northwestern University of Agriculture), Ph.D. (Virginia Tech), Associate Professor of Crop, Soil, and Environmental Sciences, 2001, 2005.

 Chewning, Jeffery – B.S. (Western Kentucky University), M.S. (University of Missouri), Ph.D. (University of Arkansas), Adjunct Professor of Animal Science, 1997.

Chi, Christina – B.A., (Guangdong University of Foreign Studies), M.S., Ph.D. (Oklahoma State University), Assistant Professor of Human Environmental Sciences, 2005.


Chism, Stephen J. – B.A. (University of Arkansas), M.L.S. (University of Kentucky), Associate Professor and Associate Librarian, 1984, 1990.
Cholthitchanta, Nophachai – B.M. (Chulalongkorn University, Thailand), M.M. (University of Northern Colorado), Assistant Professor, 2001.

Christiansen, Hope L. – B.A., M.A. (Kansas State University), Ph.D. (University of Kansas), Associate Professor of Foreign Languages, 1990, 1996.

Christy-McMullin, Kameri – B.A. (University of Missouri - Kansas City), M.S.W., Ph.D. (University of Kansas), Assistant Professor of Social Work, 2003.

Cihak, Herbert – B.A., M.A. (Brigham Young University), J.D. (University of Nebraska), M.L.S. (Brigham Young University), Professor and Director of the Law Library, 2004.

Circo, Carl J. – B.A. (University of Nebraska), J.D. (University of Nebraska School of Law), Assistant Professor of Law, 2003.


Claussen, Edgar C. – B.S.Ch.E., M.S.Ch.E., Ph.D. (University of Missouri-Rolla), P.E., Professor of Chemical Engineering, Adjunct Professor of Biological and Agricultural Engineering, 1981, 1985.


Clifford, Heath – B.A. (University of Louisville), M.A. (Eastern Kentucky University), Instructor of Kinesiology, 1996.

Coats, Kimberly F. – B.S. (Arizona State University), J.D. (Oklahoma City University), Clinical Associate Professor of Law, 1999, 2002.

Coblentz, Wayne K. – B.A. (Western Maryland College), M.S. (Penn State University), Ph.D. (Kansas State University), Adjunct Associate Professor of Agricultural Science, 1997, 2002.


Cochran, Mark J. – B.S. (New Mexico State University), M.S., Ph.D. (Michigan State University), Professor of Agricultural Economics and Agribusiness, 1982, 1991.


Cochran, William A. – B.A. (Austin College), M.S. (Trinity University), Ph.D. (University of Arkansas), Clinical Assistant Professor of Rehabilitation, 1986.

Coffey, Kenneth – B.S. (University of Tennessee), M.S. (University of Kentucky), Ph.D. (University of Missouri), Professor of Animal Science, 1996, 2003.


Cohen, Debra Rae – B.A. (Yale University), Ph.D. (University of Mississippi), Assistant Professor of English, 2003.

Coker, Clifford M. Jr. – B.S., M.S. (University of Arkansas), Associate Professor and Extension Specialist of Plant Pathology, 2003.

Cole, Jack H. – B.S., M.S., Ph.D. (Oklahoma State University), P.E., Adjunct Professor of Mechanical Engineering, 2004.


Collier, James A. – B.S.I.E. (University of Arkansas), M.S.I.E. (Purdue University), Visiting Assistant Professor of Operations Management, 2000.

Collier, Marta – B.A. (Earlham College), M.A., Ph.D. (University of Iowa), Associate Professor of Curriculum and Instruction, 1996, 2003.

Collins, Jeff T. – B.A. (Colorado State University), Ph.D. (University of Tennessee), Visiting Assistant Professor of Economics, 1999.

Collins, Kathleen – B.A., M.A., Ph.D. (University of California at Santa Barbara), Assistant Professor in Special Education, 2002.

Comfort, Kathleen A. – B.A., M.A. (Illinois State University), Ph.D. (University of Kansas), Assistant Professor of Foreign Languages, 2001.

Condray, Kathleen – B.A. (University of Arkansas), M.A., Ph.D. (University of Illinois at Urbana-Champaign), Assistant Professor of Foreign Languages, 2002.

Cone, Patrick J. – B.S., M.A. (Arizona State University), Ph.D. (University of Texas), Associate Professor of Political Science, 1996, 2002.

Conway, Cheryl L. – B.S. (Southwest Missouri State University), M.A. (University of Arkansas), M.L.S. (University of Arizona), Associate Professor and Associate Librarian, 1981, 1986.

Cook, Peggy – B.S. (Arkansas Tech University), M.S., Ph.D. (University of Arkansas), Adjunct Assistant Professor of Poultry Science, 1996.

Coon, Craig – B.S., M.S., Ph.D. (Texas A&M University), Professor of Poultry Science, Arkansas Poultry Federation Chair, 1997.

Coon, Lynda L. – B.A. (James Madison University), M.A., Ph.D. (University of Virginia), Associate Professor of History, 1990, 1996.


Costello, Thomas A. – B.S.Ag.E., M.S.Ag.E. (University of Missouri), Ph.D. (Louisiana State University), Associate Professor of Biological and Agricultural Engineering, 1986, 1992.

Cote, Robert R. – B.S. (Salve Regina University), M.B.A. (Golden Gate University), Visiting Assistant Professor of Operations Management, 2000.

Cothren, Jackson – B.S. (United States Air Force Academy), M.S., Ph.D., (Ohio State University), Assistant Professor of Geography, 2004.

Counce, Paul A. – B.S. (University of Tennessee-Martin), M.S. (Purdue University), Ph.D. (University of Georgia), Professor of Crop, Soil, and Environmental Sciences, 1983, 1992, 2003.

Couvillion, Rick J. – B.S.M.E. (University of Arkansas), M.S.M.E., Ph.D. (Georgia Institute of Technology), P.E., Associate Professor of Mechanical Engineering, 1981, 1986.

Cowling, Dan C. – B.A., M.A. (University of Arkansas), Adjunct Assistant Professor of Communication, 2002.

Crandall, Mardel A. – B.S. (Kansas State University), M.S. (Purdue University), Instructor of Human Environmental Sciences, 1995.

Crandall, Philip G. – B.S. (Kansas State University), M.S., Ph.D. (Purdue University), Professor of Food Science, 1989, 1997.


Cronan, Timothy P. – B.S. (University of Southwestern Louisiana), M.S. (South Dakota State University), D.B.A. (Louisiana Tech University), Professor and the M. D. Matthews Endowed Chair in Information Systems, 1979, 1986.

Crone, John V. – B.Landscape Arch. (University of Georgia), M.Regional Planning (University of Pennsylvania), Professor of Landscape Architecture, 1980, 1991.

Cross, Robert A. – B.S.Ch.E. (University of Arkansas), M.S. (Massachusetts Institute of Technology), Research Professor of Chemical Engineering, 1995.


Curtin, Kathryn D. – B.S. (Pennsylvania State University), M.S. (Yale University), Ph.D. (Harvard University), Assistant Professor of Biological Sciences, 2004.

D’Alisera, JoAnn – B.A. (State University of New York at New Paltz), A.M., Ph.D. (University of Illinois-Urbana-Champaign), Assistant Professor of Anthropology, 1999.


Dent, James H. – B.S., M.S., Ph.D. (Texas A&M University), Professor of Poultry Science, 1992.


DeVore, Jack B., Jr. – B.S., M.S., Ed.S. (Kansas State College of Pittsburg), Ph.D. (Kansas State University), Associate Professor of Vocational Education, 1970, 1976.

Di, Jia – B.S., M.S. (Tsinghau University), Ph.D. (University of Central Florida), Assistant Professor of Computer Science & Computer Engineering, 2005.

DiBrezzo, Rosalie – B.S. (Brooklyn College), M.S. (Indiana University), Ph.D. (Texas Woman's University), University Professor of Kinesiology, 1983, 2006.

Dillard, Tom W. – B.S. (University of Central Arkansas), M.A. (University of Arkansas), Professor and Librarian, 2004.
Dixon, Bruce L. – B.A. (University of California-Santa Barbara), M.S., Ph.D. (University of California-Davis), Professor of Agricultural Economics, 1984, 1986.


Dodridge, Benjamin – B.S. (Memphis State University), M.B.A. (Michigan State University), Visiting Assistant Professor of Operations Management, 1984.

Doeksen, Gerald A. – B.S. (South Dakota State), M.S., Ph.D. (Oklahoma State University), Adjunct Associate Professor of Agricultural Economics and Agribusiness, 2004.


Dong, Elaine X. – B.S. (Beijing Normal University), M.L.S. (Wuhan University), M.L.S. (McGill University), Assistant Professor and Assistant Librarian, 2005.

Donoghue, Ann – B.S. (San Diego State University), M.S. (Texas A&M University), Ph.D. (F. Edward Herbert School of Medicine), Poultry Science, 2000.

Donoghue, Daniel – B.S. (Medical University of South Carolina), M.S. (Brigham Young University), Ph.D. (Texas A&M University), Post Doctoral Fellow (Rutgers University, Cook College), Assistant Professor of Poultry Science, 2000.


Dowdle, Andrew – B.A. (University of Tennessee), M.A. (University of Iowa), Ph.D. (Miami University), Assistant Professor of Political Science, 2003.


Durdik, Jeannine M. – B.S. (Purdue University), Ph.D. (Johns Hopkins University), Professor of Biological Sciences, 1994, 2004.

Durham, Bill M. – B.A. (Rutgers, the State University of New Jersey), M.S. (Clarkson College of Technology), Ph.D. (Wayne State University), Professor of Chemistry and Biochemistry, 1979, 1990.


Dutton, Donnie – B.S., M.Ed. (North Carolina State University), Ph.D. (Florida State University), Professor of Adult Education, 1974.


Dwyer, Mavourneen – B.A. (University of Montreal), M.F.A. (University of Texas-Austin), Assistant Professor of Drama, 1999.

Dye, Judith – B.A. (Michigan State University), M.S.L.S. (Atlanta University), Associate Professor and Associate Librarian, 2002.

Edwards, Findlay G. – B.S.C.E., B.S.G.E., M.S.C.E. (New Mexico State University), M.M. (University of New Mexico), Ph.D. (New Mexico State University), P.E., Assistant Professor of Civil Engineering, 1999.

Eichmann, Raymond – B.A., M.A. (University of Arkansas), Ph.D. (University of Kentucky), Professor of Foreign Languages (French), 1969, 1983.

Ellers, Linda – B.S.E., M.Ed. (University of Arkansas, Little Rock), Ph.D. (Louisiana State University), Assistant Professor of Curriculum and Instruction, 2001.


El-Shenawee, Magda – B.S., M.S. (Assiut University, Egypt), Ph.D. (University of Nebraska), Assistant Professor of Electrical Engineering, 2000.

Emmert, Jason – B.S., M.S., Ph.D. (University of Illinois), Associate Professor of Poultry Science, 1997, 2002.


Erf, Gisela F. – B.S., M.S. (University of Guelph, Canada), Ph.D. (Cornell University), Professor of Poultry Science, 1994, 2004.

Erickson, Kirstin C. – B.A. (St. Olaf College), M.A., Ph.D. (University of Wisconsin, Madison), Assistant Professor of Anthropology, 2001.

Espinoza, Leonel A. – B.S. (Iowa State University), M.S., Ph.D. (University of Florida), Assistant Professor of Crop, Soil, and Environmental Sciences, 2003.

Etnes, William J. – B.S. (North Carolina State University), M.S. (University of Georgia), Ph.D. (University of Rochester), Professor of Biological Sciences, 1988, 2004.


Ewelukwa, Uche U. – J.D. equivalent (University of Nigeria), LL.M. (University College, London), LL.M., S.J.D. (Harvard University), Assistant Professor of Law, 2001.

Fant, Earnest W. – B.S.I.E. (University of Arkansas), M.S.I.E. (Southern Methodist University), Ph.D. (Texas Tech University), P.E., Associate Professor of Industrial Engineering, 1988, 1994.

Farah, Mounir A. – B.A. (University of Bridgeport), Ph.D. (New York University), Professor of Curriculum and Instruction, 1995, 1999.

Frenz, Thomas – B.A. (University of Kansas), M.A., Ph.D.

Fredrick, David C. – B.A. (Fort Lewis College), M.S. (University of Arkansas), Ph.D. (Pennsylvania State University), Professor of Human Environmental Sciences, 1987, 1995.

Feldman, William A. – B.S. (Tufts University), M.S. (Northwestern University), Ph.D. (Queen’s University), Professor of Mathematical Sciences, 1971, 1981.

Fenn, Patrick – B.S. (State University of New York at Syracuse), Ph.D. (University of Wisconsin), Associate Professor of Plant Pathology, 1979, 1984.


Fields, Darell W. – B.S. (University of Texas, Arlington), M.Arch., Ph.D. (Harvard University), Associate Professor of Architecture and African American Studies, 2005.


Findley, Jr., Benjamin F. – B.B.A., M.S. (West Virginia University), Ph.D. (University of Northern Colorado), Visiting Assistant Professor of Operations Management, 1993.


Finn, Don W. – B.S. (Texas Tech University), M.B.A. (Arkansas State University), Ph.D. (University of Arkansas) Professor of Accounting and the Garrison/Wilson Chair in Accounting, 2003.

Fitch-Hilgenberg, Majorie E. – B.S., M.S. (University of Arkansas), Ph.D. (University of Wisconsin), Associate Professor of Human Environmental Sciences, 1999, 2005.

Fitzpatrick, Lynn E. – B.S. (Cornell University), M. Arch. (Rice University), Clinical Assistant Professor of Architecture, 1999.


Foley, Larry – B.A. (University of Arkansas), M.S. (University of Central Arkansas), Associate Professor of Journalism, 1993.

Foote, Jerald C. – B.A. (University of Northern Colorado), M.S., R.D., Ph.D. (Texas Tech University), Assistant Professor of Human Environmental Sciences, 2002. Adjunct Assistant Professor of Food Science, 2003.

Forbess, Janet – B.S.E. (Georgia Southern College), M.A. (University of Florida), Instructor in Kinesiology, 1978.


Foster, Sharon E. – B.A. (University of California at Los Angeles), J.D. (Loyola Law School), LL.M. (University of Edinburgh, Scotland), Clinical Associate Professor of Law, 2000, 2003.

Fredrick, David C. – B.A. (University of Kansas), M.A., Ph.D. (University of Southern California), Associate Professor of Foreign Languages, 1991, 1997.

Frentz, Thomas – B.S., M.S., Ph.D. (University of Wisconsin), Professor of Communication, 1985, 1995.

Freund, Joel S. – B.S., M.S., Ph.D. (Northwestern University), Associate Professor of Psychology, 1970, 1976.

Friesen, Kim G. – B.S. (University of Nebraska), M.S. (Kansas State University), Adjunct Professor of Animal Science, 1998.

Fritsch, Ingrid – B.S. (University of Utah), Ph.D. (University of Illinois-Urbana/Champaign), Associate Professor of Chemistry and Biochemistry, 1992, 1997.

Fu, Huaxiang – B.S. (University of Science and Technology of China), M.S., Ph.D., (Fudan University), Assistant Professor of Physics, 2002.

Fukushima, Tatsuya – B.A. (Kanto Gakuin University, Japan), M.A., Ph.D. (Oklahoma State University), Assistant Professor of Foreign Languages, 2001.

Funkhouser, Eric M. – B.A., M.A. (University of Nebraska), Ph.D. (Syracuse University), Assistant Professor of Philosophy, 2004.

Fussell, Leonard – B.S., M.S., D.M.V. (University of Georgia), Adjunct Assistant Professor of Poultry Science, 1996.


Ganson, Judith A. – B.A. (Purdue University), M.S. Library Science (University of Illinois), M. Administration (University of California, Riverside), Associate Professor and Associate Librarian, 2001.

Ganster, Daniel C. – B.A. (Wabash College), M.S., Ph.D. (Purdue University), Charles C. Fichtner Chair in Management and Professor of Management, 1990.

Garcia, M. Elena – B.A. (University of Arkansas at Little Rock), M.S., Ph.D. (University of Arkansas), Associate Professor of Horticulture, 2005.

Gardisser, Dennis – B.S., M.S., Ph.D. (University of Arkansas), Research Professor of Biological and Agricultural Engineering, 1995.

Garner, Jerald L. – B.S. (Park College), M.S. (University of Arkansas), Visiting Assistant Professor of Operations Management, 1996.


Gattis, Carol S. – B.S.E.E., M.S.E.E., Ph.D. (University of Arkansas), Visiting Assistant Professor of Operations Management and Adjunct Associate Professor of Industrial Engineering, 2002.


Gattis, Jim L. – B.S.E.E., M.S.E.E. (University of Arkansas), Ph.D. (Purdue University), P.E., Associate Professor of Electrical Engineering, 1972, 1977.

Gawley, Robert E. – B.S. (Stetson University), Ph.D. (Duke University), Professor of Chemistry, 2003.


Gbur, Edward E., Jr. – B.S. (Saint Francis College), M.S., Ph.D. (Ohio State University), Professor of Crop, Soil, and Environmental Sciences, 1987, 1998.

Gee-Banacloche, Julio R. – Licenciado en Ciencias Fisicas (Universidad Autonoma de Madrid), Ph.D. (University of New Mexico), Professor of Physics, 1989, 2000.
Gealy, David R. – B.S. (University of Nebraska), M.S., Ph.D. (University of Illinois), Visiting Professor of Crop, Soil and Environmental Sciences, 1996.


Gentry, G. Marie – B.S. (Arizona State University), M.S. (Iowa State University), Ph.D. (Texas Tech University), Associate Professor of Interior Design, 2000.

Gentry, Johnnie L., Jr. – B.S. (Murray State University), M.S. (University of Kentucky), Ph.D. (Columbia University), Professor and Curator, 1979, 1985.


Geren, Collis R. – B.S. (Northeastern State College), M.S. (Kansas State College of Pittsburg), Ph.D. (Oklahoma State University), Professor of Chemistry and Biochemistry, 1976, 1984.


Ghadian, Najib – B.Sc. (United Arab Emirates University), M.A. (Rutgers University), M.A., Ph.D. (City University of New York), Assistant Professor of Political Science, 2000.

Gibbons, James W. – B.S. (Hendrix College), M.S., Ph.D. (University of Arkansas), Research Assistant Professor of Rice Breeding, 1999.


Gibson, Tess – B.A. (Baker University), M.L.S. (Emporia State University), M.A. (University of South Dakota), Assistant Professor and Assistant Librarian, 2005.


Goggin, Fiona L. – B.S. (Cornell University), Ph.D. (University of California, Davis), Assistant Professor of Entomology, 2001.

Gohn, Lyle A. – B.S., M.S., Ph.D. (Purdue University), Associate Professor of Higher Education, 1982.


Goodman-Strauss, Chaim – B.S., Ph.D. (University of Texas), Associate Professor of Mathematical Sciences, 1994, 2000.


Gordon, Joel – B.A. (University of Illinois), Ph.D. (University of Michigan), Associate Professor of History, 1999.


Gozan, Paul David – B.A. (University of the Ozarks), M.M. (Memphis State University), M.M. (University of Arkansas, Fayetteville), D.M.A. (University of Missouri, Kansas City), Visiting Associate Professor of Music, 2004.

Graff, Thomas Oscar – B.S., M.A. (Western Illinois University), Ph.D. (University of Kansas), Associate Professor of Geography, 1973, 1979.


Griffis, Carl L. – B.S.Ch.E., M.S.Ch.E., Ph.D. (University of Arkansas), Professor of Biological and Agricultural Engineering, 1967, 1983.


Gross, Roger D. – B.A. (University of Oregon), M.A. (University of Minnesota), Ph.D. (University of Oregon), Professor of Drama, 1980.

Guccione, Margaret J. – B.S. (St. Joseph's College), M.S. (Miami University), Ph.D. (University of Colorado), Professor of Geology, 1979, 2001.

Gunter, Stacey A. – B.S. (Oregon State University), M.S. (University of Nevada Reno), Ph.D. (Oklahoma State University), Associate Professor of Animal Science, 1996, 2002.

Gunter, Timothy – B.S.E., M.M. (University of Arkansas), Adjunct Assistant Professor of Music, 1991.

Guo, Chunlei – B.S. (Changchun Institute of Optics and Fine Mechanics, China), Ph.D. (University of Connecticut), Assistant Professor of Physics, 2001.


Gupta, Rajendra – B.Sc, M.Sc. (Agra University), Ph.D. (Boston University), Professor of Physics, 1978, 1985.
Gupta, Usha – B.S. (Delhi University), M.L.S. (Simmons College), Professor and Librarian, 1985, 1993.

Guzman, Rafael – B.A. (University of Dayton), LL.B. (George Washington University), Professor of Law, 1967, 1974.

Haggard, Brian – B.S. (University of Missouri), M.S. (University of Arkansas), Ph.D. (Oklahoma State University), Adjunct Assistant Professor of Biological and Agricultural Engineering, 2001.

Hagstrom, Fran – B.A. (Southwest Baptist University), M.A. (St. Louis University), M.S. (UT HSC-Houston, TX), Ph.D. (Clark University), Assistant Professor, 2002.

Hale, William Micah – B.S., M.S., Ph.D. (Oklahoma University), Assistant Professor of Civil Engineering, 2002.


Hammons, James – B.S. (Northwestern State University of Louisiana), M.S. (Southern Illinois University), Ph.D. (University of Texas), Professor of Higher Education, 1976.

Hanlin, Todd C. – B.A. (Wabash College), M.A. (University of Kansas), Ph.D. (Bryn Mawr College), Professor of Foreign Languages (German), 1981, 1994.

Hardgrave, Bill C. – B.S. (Arkansas Tech University), M.B.A. (Southwest Missouri State University), Ph.D. (Oklahoma State University), Edwin and Karlee Bradberry Endowed Chair and Associate Professor of Information Systems, 1993, 1997.


Hargis, Billy – B.S. (University of Minnesota), M.S. (University of Georgia), D.V.M., Ph.D. (University of Minnesota), Professor of Poultry Science, 2000.


Harris, William C. – Major, USAF, B.S. (University of Arkansas), M.S. (Troy State University), Assistant Professor of Aerospace Studies, 1997.

Harter, William G. – B.S. (Hiram College), Ph.D. (University of California, Irvine), Professor of Physics, 1985.

Havens, Jerry A. – B.S.Ch.E. (University of Arkansas), M.S.Ch. E. (University of Colorado), Ph.D. (University of Oklahoma), P.E., Distinguished Professor of Chemical Engineering, 1970, 1987.

Haydar, Adnan F. – B.A., M.A. (American University of Beirut), Ph.D. (University of California at San Diego), Professor of Foreign Languages, 1993.

Hays, Donald – B.A. (Southern Arkansas University), M.F.A. (University of Arkansas), Associate Professor of English, 1990.

Heard, Douglas P. – B.A. (University of Wisconsin, Madison), M.A., Ph.D. (University of Iowa), Associate Professor of Finance, 1989.


Hehr, John G. – B.S.Ed. (Ohio University), M.A. (Western Michigan University), Ph.D. (Michigan State University), Professor of Geography, 1977, 1986.

Hendrix, William H. – B.S. (Clemson), M.S. (University of Arkansas), Ph.D. (Iowa State University), Professor of Entomology, 1996.

Henry, Ralph L. – B.S.E. (University of Kansas), M.S., Ph.D. (Kansas State University), Associate Professor of Biological Sciences, 1996, 2002.

Hensley, David L. – B.S. (University of Missouri), M.S., Ph.D. (Purdue University), Professor and Head of Horticulture, 2000.

Herman, Gregory S. – B.Arch. (University of Cincinnati), M.Arch. (Rice University), Associate Professor of Architecture, 1991, 1998.

Herring, Donald R. – B.S., M.S. (Texas A&M University), Ph.D. (The Ohio State University), Professor of Agricultural and Extension Education, 1997.


Hettiarachchy, Navam S. – B.S. (University of Madras, India), M.S. (Edinburgh University, Scotland), Ph.D. (University of Hull, England), Professor of Food Science, 1992, 1997.

Hexmoor, Henry – B.S. (State University of New York at Stony Brook), M.S. (Georgia Institute of Technology), Ph.D. (State University of New York at Buffalo), Assistant Professor of Computer Science and Computer Engineering, 2000.

Heymsfield, Ernest – B.S., M.S. (Polytechnic Institute of New York), Ph.D. (City University of New York), Assistant Professor of Civil Engineering, 2001.


Hilsenroth, Mark J. – B.A. (University of Akron), Ph.D. (University of Tennessee), Assistant Professor of Psychology, 1996.


Hinton, James F. – B.S. (University of Alabama), M.S., Ph.D. (University of Georgia), University Professor of Chemistry and Biochemistry, 1965, 1989.

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Hipple, William J. – B.S. (U.S. Naval Academy), M.S. (George Washington University), Ph.D. (University of Texas), Visiting Assistant Professor of Operations Management, 1995.

Hogan, Jeffrey – B.Sc., Ph.D. (University of New South Wales), Assistant Professor of Mathematical Sciences, 2000.


Holyfield, Lori – B.S.E., M.A. (University of Arkansas), Ph.D. (University of Georgia), Associate Professor of Sociology, 1995, 2001.
Hurd, John D. – B.S., M.S. (Clemson), Ph.D. (University of Arkansas). Assistant Professor of Entomology, 2002.

Horowitz, Andrew – B.S. (University of Maryland), M.S., Ph.D (University of Wisconsin), Associate Professor of Economics, 1997.


Howell, Terry A. – B.S.Ag.E. (Texas A&M University), Ph.D. (University of Wisconsin), Adjunct Research Assistant Professor of Food Science, Adjunct Assistant Professor of Biological and Agricultural Engineering, 2002.

Huff, Geraldine – B.S., M.S., Ph.D. (University of Arkansas), Research Assistant Professor of Poultry Science, 1994, 1998.


Huggins, Denise W. – B.A., M.A., Ph.D. (Texas Woman's University), Assistant Professor of Sociology, 2001.

Hughes, Jean S. – B.S. (University of Central Arkansas), M.Ed., Ed.D. (University of Arkansas), Assistant Professor of Recreation, 2000.

Huitink, Gary – B.S., M.S. (Iowa State University), Associate Professor of Biological and Agricultural Engineering, 1995.

Hulen, Jeannie L. – B.F.A. (Kansas City Art Institute), M.F.A. (Louisiana State University), Assistant Professor of Art, 2002.


Hurd, Debra – B.A. (University of Arkansas), M.P.A. (University of Arkansas), Ph.D. (University of Arkansas), Research Associate Professor of Social Work, 2004.

Hurd, Fred Coy – B.S. (Arkansas State University), M.S., Ph.D. (University of Arkansas), Visiting Assistant Professor of Operations Management, 2002.

Imbeau, Marcia B. – B.A. (Hendrix College), M.Ed. (University of Arkansas at Little Rock), Ph.D. (University of Connecticut), Associate Professor of Special Education, 1991, 1997.

Ingels, Neil B., Jr. – B.S.E.E. (University of Arkansas), M.S.E.E. (University of Santa Clara, California), Ph.D. (Stanford University, California), Adjunct Professor of Biological and Agricultural Engineering, 2003.

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Ivey, David M. – B.S., Ph.D. (University of Georgia), Associate Professor of Biological Sciences, 1992, 1998.

Jack, Nancy E. – B.S. (Tarleton State University), M.S., Ph.D. (New Mexico State University), Assistant Professor of Animal Science, 2000, 2004.

Jackson, James R. – B.A. (Southern Methodist University), J.D. (University of Arkansas), M.L.I.S. (University of Oklahoma), Associate Librarian, Law, 1996.

Jackson, Thomas L. – B.A. (University of the Pacific), M.A., Ph.D. (Bowling Green State University), Professor of Psychology, 1988, 1991.


James, Douglas Arthur – B.S., M.S. (University of Michigan), Ph.D. (University of Illinois), University Professor of Biological Sciences, 1953, 2004.

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Jennings, John A. – B.S. (Southwest Missouri State University), M.S. (University of Arkansas), Ph.D. (University of Missouri), Adjunct Professor of Animal Science and Extension Livestock Specialist, 1998.

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Johnson, Charlene – Psy., M.Ed. (University of Cincinnati), Ph.D. (Atlanta University), Ph.D. (Emory University), Associate Professor of Middle Level Education, 1992, 1998.

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Johnson, Mark R. – B.S. (Brooklyn College), M.S. (Purdue University), Ph.D. (Michigan State University), Associate Professor of Mathematical Sciences, 1995, 2001.

Johnson, Michael G. – B.S., M.S. (University of Illinois), Ph.D. (University of California-Davis), Professor of Food Science, 1984.

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Jones, Phillip J. – B.A. (University of California, Santa Barbara), M.A. (University of California, Irvine), M.S. (University of Illinois), Associate Professor and Associate Librarian, 2003.


Jong, Ing-Chang – B.S.C.E. (National Taiwan University), M.S.C.E. (South Dakota School of Mines and Technology), Ph.D. (Northwestern University), P.E., Professor of Mechanical Engineering, 1965, 1974.

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Jordan, Gerald B. – B.A. (University of Arkansas), M.S.J. (Northwestern University), Associate Professor of Journalism, 1995.

Judges, Donald P. – B.A. (Johns Hopkins University), J.D. (University of Maryland), Ph.D. (University of Tulsa), Ben J. Altheimer Professor of Legal Advocacy, 1989, 1996.


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Katayama, William R. – B.A. (Concordia College), M.S., Ph.D. (North Dakota State University), Adjunct Professor of Entomology, 1992.

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Keck, Lloyd D. – B.S. (University of Arkansas), D.V.M. (Louisiana State University), Ph.D. (University of Arkansas), Adjunct Professor of Poultry Science, 1999.


Kelley, Christopher R. – B.A. (Louisiana State University), J.D. (Howard University), LL.M. (University of Arkansas), Associate Professor of Law, 1998, 2002.


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Killenbeck, Ann M. – B.A., J.D., M.A. (University of Nebraska), M.Ed. (University of Arkansas), Ph.D. (University of Michigan), Associate Clinical Professor of Law, 2004.

Killenbeck, Mark R. – A.B. (Boston College), J.D., Ph.D. (University of Nebraska), Wylie H. Davis Distinguished Professor of Law, 1988, 2003.

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King, Jerry – B.S., M.S. (Butler University), Ph.D. (Northeastern University), Adjunct Professor of Food Science, 2004.


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Knowles, Eric – B.A. (Antioch College), Ph.D. (Boston University), Professor of Psychology, 1984.

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Kring, Timothy J. – B.A. (Quinnipiac College), M.S., Ph.D. (Texas A&M University), Professor of Entomology, 1985, 1994.

Kruse, Timothy A. – B.S. (Purdue University), M.B.A. (University of Missouri), Ph.D. (Purdue University), Assistant Professor of Finance, 2001.

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Kulczak, Deborah E. – B.A., M.L.S. (Kent State University), Associate Professor and Associate Librarian, 1988, 2000.

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Langsner, Steve – B.S. (Springfield College), M.S. (University of Baltimore), Re.D. (Indiana University), Associate Professor of Recreation, 1989, 1995.

Lanzani, Loredana – B.S. (University of Rome II), Ph.D. (Purdue University), Associate Professor of Mathematical Sciences, 1997, 2003.


Lawson, Glenda – A.D.N. (Mississippi University for Women), B.S.N., C.N.S., M.S.N. (University of Texas Medical Branch), Ph.D. (Texas Woman's University), Associate Professor of Nursing, 2000.

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Lee, Wookwon – B.S. (Inha University, Korea), M.S., Ph.D. (George Washington University), Assistant Professor of Electrical Engineering, 2000.


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Levine, Daniel – B.A. (University of Minnesota), Ph.D. (University of Cincinnati), Professor of Foreign Languages (Classics), 1980, 1998.

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Li, Jiali – B.S. (Hei Long Jiang University), M.S. (University of Science & Technology of China), M.S., Ph.D. (City University of New York), Assistant Professor Physics, 2002.

Li, Wengning – B.S. (University of Iowa), M.S., Ph.D. (University of Minnesota), Associate Professor of Computer Science and Computer Engineering, 1989, 1995.

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Lim, Sung M. – B.S., M.S. (Seoul National University), M.S. (Mississippi State University), Ph.D. (Michigan State University), Professor of Plant Pathology, 1991.


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Lorenz, Gus M. – B.S.A., M.S., Ph.D. (University of Arkansas), Professor of Entomology, 1997.


Lucas, Christopher J. – B.A. (Syracuse University), M.A. (Northwestern University), Ph.D. (Ohio State University), Professor of Educational Leadership, Counseling, and Foundations, 1993.


Luoni, Stephen D. – B.S.Arch. (Ohio State University), M.Arch. (Yale University), Associate Professor of Architecture, 2003.

Lusby, Keith S. – B.S., M.S. (Kansas State University), Ph.D. (Oklahoma State University), Professor Animal Science, 1995.

Lusth, John C. – B.S. (Michigan Technological University), M.S. (Duke University), Ph.D. (University of Alabama), Associate Professor of Computer Science and Computer Engineering, 2002.

Luttrell, Randall G. – B.S. (Texas A&M University), M.S., Ph.D. (University of Arkansas), Professor of Entomology, 1998.

Lyles, Ivory W. – B.S. (Alcorn State University), M.S. (Mississippi State University), Ph.D. (Ohio State University), Adjunct Professor of Agricultural and Extension Education, 2001.

Lyons, Jack C. – B.A. (Valparaiso University), M.A., Ph.D. (University of Arizona), Assistant Professor of Philosophy, 2001.


Madison, Bernard L. – B.S. (Western Kentucky University), M.S., Ph.D. (University of Kentucky), Professor of Mathematical Sciences, 1979.


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Markham, Elizabeth J. – B.A. (University of Otago, New Zealand), Ph.D. (Cambridge University), Research Professor in the Department of Music, 2000.


Marsh, Paul M. – B.S., M.S., Ph.D. (University of California-Davis), Adjunct Professor of Entomology. 1998.


Martin, Elizabeth (Betty) M. – B.S., M.S., Ph.D. (University of Arkansas), Lecturer, 2003.

Martin, Patricia Jean – B.A. (Rollins College), M.F.A. (Purdue University), Associate Professor of Drama, 1995, 2001.


Mason, Scott J. – B.S.I.E., M.S.E. (University of Texas), Ph.D. (Arizona State University), Assistant Professor of Industrial Engineering, 2000.

Matlock, Marty D. – B.S., M.S., Ph.D. (Oklahoma State University), Associate Professor of Biological and Agricultural Engineering, 2001, 2003.

Matthews, Mary E. – B.S.E., J.D. (University of Arkansas), Professor of Law, 1986, 1996.

Mattice, John D. – B.A. (Grinnell College), Ph.D. (University of Arkansas), Research Associate Professor of Crop, Soil, and Environmental Sciences, 1989, 2003.

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Maxwell, Charles – B.S., M.S., (University of Georgia), Ph.D. (University of Wisconsin), Professor of Animal Science, 1996.

Mayes, Richard – B.S. (University of Arkansas), Major (U.S. Army Corps of Engineers), Assistant Professor of Military Science and Leadership, 2004.

Mayes, Susan – B.S.E., M.Ed. (University of Arkansas), Instructor in Kinesiology, 1992.


McConn, Roy – B.S.E.E., M.S.E.E. (University of Illinois), Ph.D. (University of Dayton), Associate Professor of Electrical Engineering, 2003.

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Parker, Sandra C. – B.S.N.S., M.A., Ph.D. (University of Arkansas), Adjunct Professor of Industrial Engineering, 1970, 1992.


Patnoe, Jerry L. – B.A. (Indiana University), M.A., Ph.D. (University of Arizona), Associate Professor of Sociology, 1990, 1996.

Paul, David W. – B.S. (Southwestern University), Ph.D. (University of Cincinnati), Associate Professor of Chemistry and Biochemistry, 1980, 1986.

Pederson, Donald O. – B.S. (Texas Technological College), Ph.D. (Rice University), Professor of Physics, 1972, 1984.

Peng, Xiaogang – B.S., M.S., Ph.D. (Jilin University, China), Associate Professor of Chemistry and Biochemistry, 1999, 2003.

Penney, W. Roy – B.S.M.E., M.S.M.E. (University of Arkansas), Ph.D. (Oklahoma State University), P.E., Professor of Chemical Engineering, 1989.

Pennington, Jodie A. – B.S. (Western Kentucky University), M.S. Ph.D. (University of Illinois), Adjunct Professor of Animal Science, 1997.


Peters, Gary – B.S. (Arkansas Tech University), M.S. (University of Missouri - Columbia), Ph.D. (University of Oregon), Assistant Professor of Accounting, 2003.

Petretic, Patricia A. – B.A. (Youngstown State University), M.A., Ph.D. (Bowling Green State University), Associate Professor of Psychology, 1991.

Petris, Giovanni – B.S. (Universita degli Studi di Milano, Italy), M.S., Ph.D. (Duke University), Assistant Professor of Mathematical Sciences, 1999.

Peven, Michael D. – A.B. (University of Illinois, Chicago), M.F.A. (School of the Art Institute of Chicago), Professor of Art, 1977, 1994.

Phillips, Jerry M. – B.S. (University of Arkansas at Monticello), M.S., Ph.D. (University of Arkansas), Professor of Crop, Soil, and Environmental Sciences, Southwest Research and Extension Center, Hope, 1985, 1995.


Piga, Giovanna P. – Dipl. Arch. (University of Rome), Adjunct Assistant Professor, 1994.

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Pinto, Ines – B.S., M.S. (University of Chile), Ph.D. (Louisiana State University Medical Center), Assistant Professor of Biological Sciences, 2000.

Plafcan, Frank T. – B.S.A., M.S. (University of Arkansas), Ed.D. (Oklahoma State University), Adjunct Assistant Professor of Agricultural and Extension Education, 1993.


Plue, Raymond E. – D.V.M. (Purdue University), M.S. (University of Georgia), Adjunct Professor of Poultry Science, 1992.

Pohl, Edward A. – B.S.E.E. (Boston University), M.S.E.M. (University of Dayton), M.S.S.E. (Air Force Institute of Technology), M.S.R.E., Ph.D. (University of Arizona), Associate Professor of Industrial Engineering, 2004.

Pohlman, Fred W. – B.S. (University of Missouri), M.S. (University of Tennessee), Ph.D. (Kansas State University), Associate Professor of Animal Science, 1997; Adjunct Professor of Food Science, 2003.

Popov, Valentin E. – M.S. (Moscow State University), Ph.D. (Agro-Physical Institute), Visiting Professor of Chemical Engineering, 1994.


Powell, F. Allen – M.S. (Amber University, Dallas), Instructor of Human Environmental Sciences, 2003.

Powell, Jeremy – B.S. (University of Arkansas), D.V.M. (Oklahoma State University), Assistant Professor of Animal Science, 2002.


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Proctor, Andrew – B.S. (Queen Mary College, University of London), M.S., Ph.D. (University of Arkansas), Professor of Food Science, 1992, 2001.


Pulay, Peter – M.S. (Eotvos L. University, Budapest), Ph.D. (University of Stuttgart), Roger Bost Professor of Chemistry and Biochemistry, 1982, 1983.

Pumford, Neil R. – B.S., Ph.D. (University of Arkansas for Medical Sciences), Adjunct Research Assistant Professor of Poultry Science, 1999.

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Quinn, William A. – B.A. (Xavier University), M.A., Ph.D. (Ohio State University), Professor of English, 1979, 1995.


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Reeves, Carol A. – B.S. (Georgia Southern College), M.A. (University of South Carolina), Ph.D. (University of Georgia), Associate Professor of Management and the Cecil and Gwendolyn Cupp Applied Professorship in Entrepreneurship, 1990, 1996.

Reid, Margaret F. – B.A. (University of Marburg, West Germany), M.A. (University of Bonn), M.P.A. (University of Oklahoma), M.B.A. (Central State University), Ph.D. (University of Oklahoma), Associate Professor of Political Science, 1993, 1999.

Rencis, Joseph J. – B.S. (Milwaukee School of Engineering), M.S. (Northwestern University), Ph.D. (Case Western Reserve University), P.E., Professor of Mechanical Engineering, 2004.

Rennie, Craig G. – B.A. (University of Toronto), M.B.A. (Dalhousie University), Ph.D. (University of Oregon), Assistant Professor of Finance, 2001.

Restrepo, Luis Fernando – B.A. (Universidad Pontificia Bolivariana), M.A., Ph.D. (University of Maryland at College Park), Associate Professor of Foreign Languages, 1995, 2001.

Reyes, Javier – B.A. (Instituto Tecnologico y de Estudios Superiores de Monterrey), Ph.D. (Texas A&M University), Assistant Professor of Economics, 2003.

Rhoods, Douglas Duane – B.A., M.A. (Wichita State University), Ph.D. (Kansas State University), Associate Professor of Biological Sciences, 1990, 1996.

Richardson, Michael D. – B.S. (Louisiana Tech University), M.S. (Louisiana State University), Ph.D. (University of Georgia), Associate Professor of Horticulture, 1998, 2002.

Ricke, Steven C. – B.S., M.S. (University of Wisconsin), Ph.D. (University of Wisconsin), Professor and the Donald “Buddy” Wray Chair in Food Science, 2006.

Ricker, Judith – B.S., M.A., Ph.D. (University of Nebraska), Professor of Foreign Languages (German), 1980, 1998.

Rieck, Yo’Av – B.A. (Israel Institute of Technology), Ph.D. (University of Texas), Assistant Professor of Mathematical Sciences, 2000.


Riggs, Charles, Jr. – B.S. (University of Texas), M.S., Ph.D. (Texas A&M University), Professor of Kinesiology, 1984, 1992.

Riggs, Robert D. – B.S.A., M.S. (University of Arkansas), Ph.D. (North Carolina State College), University Professor of Plant Pathology, 1958, 1992.

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Ritter, Gary – B.S.B.A. (John Carroll University), M.A. (University of Manchester, England), Ph.D. (University of Pennsylvania), Associate Professor of Education Reform and an Endowed Chair in Education Policy, 2000, 2005.


Robertson, Lola – B.S., M.S. (Florida State University), Ed.D. (Indiana University, Bloomington), Associate Professor of Human Environmental Sciences, 2006.
Robertson, William C. – B.S. (University of Wisconsin), M.S., Ph.D. (Texas A&M University), Professor of Crop, Soil, and Environmental Sciences, 2003.

Robbins, James A. – B.S. (University of Wisconsin), M.S. (University of Georgia), Ph.D. (University of California-Davis), Research Associate Professor of Horticulture, 1998.

Robbins, Robert Thomas – B.S., M.S. (Kansas State University), Ph.D. (North Carolina State University), Professor of Plant Pathology, 1979, 1990.


Roeder, Mikelle J. – B.S., M.S. (Washington State University), Ph.D. (University of Idaho), Adjunct Assistant Professor of Animal Science, 2002.


Rogers, Marilyn – B.A. (Northwestern State University, Louisiana), M.L.S. (Louisiana State University), Assistant Professor and Assistant Librarian, 1987.


Rutger, J. Neil – B.S. (University of Illinois), M.S., Ph.D. (University of California - Davis), Adjunct Professor of Crop, Soil, and Environmental Sciences USDA (ARS), 1995.


Sagens, Cynthia L. – B.A. (University of Iowa), Ph.D. (University of Utah), Associate Professor of Biological Sciences, 1994, 2000.


Saunders, Matthew C. – B.S. (University of Arkansas), M.S. (Loughborough University of Technology), University Professor and Librarian, 1992, 2005.

Rudd, Russell – B.A. (Syracuse University), M.Arch. (Washington University), Assistant Professor of Architecture, 2000.

Ruiz, M. Reina – B.A. (University of Leon, Spain), M.A. (Kansas State University), Ph.D. (Washington University), Assistant Professor of Foreign Languages, 2001.


Rupe, John C. – B.A. (Goshen College), B.S. (Colorado State University), M.S., Ph.D. (University of Kentucky), Professor of Plant Pathology, 1984, 2001.

Ryan, Jeffrey J. – B.A. (Colorado State University), M.A., Ph.D. (Rice University), Associate Professor of Political Science, 1990, 1996.


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Santos, Sarah K. – B.A. (University of Arkansas), M.L.S. (Vanderbilt University), Assistant Professor and Assistant Librarian, 2000.

Sattar, Haroon – B.A. (Bangladesh University of Engineering and Technology), M.A. (University of Georgia), Assistant Professor of Interior Design, 2004.

Sauveur, Thomas J. – B.S. (University of Wisconsin – Stevens Point), M.S., Ph.D. (University of Wisconsin – Madison), Adjunct Assistant Professor of Crop, Soil, and Environmental Sciences, 1996.

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Scheide, Frank M. – B.S. (University of Wisconsin-River Falls), M.A. (New York University), Ph.D. (University of Wisconsin-Madison), Associate Professor of Chemistry and Biochemistry, 1989.


Schmidt, William F. – B.S.M.E. (University of Kentucky), M.S.E., Ph.D. (University of Washington), P.E., Professor of Mechanical Engineering, 1985.


Schneider, Mary J. Grinstead – B.S.Ed. (Central Missouri State College), M.A., Ph.D. (University of Missouri), Professor of Anthropology, 1969, 1982.

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Schröder, David A. – B.S. (Purdue University), Ph.D. (Arizona State University), Professor of Psychology, 1976, 1989.

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Schweiger, Beth Barton – B.A. (Stephen F. Austin State university), M.A., Ph.D. (University of Virginia), Assistant Professor of History, 2000.


Scott, Robert C. – B.S., M.S. (Oklahoma State University), Ph.D. (Mississippi State University), Associate Professor of Crop, Soil, and Environmental Sciences, 2003.

Seidemian, Steven – B.S., M.S., Ph.D. (Texas A&M University), Extension Specialist of Food Science, 2002.


Selvam, Rathinam Panneer – B.E., M.E. (University of Madras, India), M.S.C.E. (South Dakota School of Mines and Technology), Ph.D. (Texas Tech University), P.E., Professor of Civil Engineering, 1986, 1999.


Shadden, Barbara B. – B.S. (Oberlin College), M.A. (Southern Connecticut State College), Ph.D. (University of Tennessee), Professor of Communication Disorders, 1979, 1992.

Shafirstein, Gal – B.Sc. (Ben Gurion University, Israel), M.Sc., Ph.D. (Technion, Israel Institute of Technology), Adjunct Assistant Professor of Biological and Agricultural Engineering, 2004.

Shannon, Graham F. – B.A., B.Arch. (University of Arkansas), M.Arch. in Urban Design (Rice University), Professor of Architecture, 1979, 1990.

Sheng, Guangyao – B.S., M.S. (Nanjing University), Ph.D. (Michigan State University), Assistant Professor of Crop, Soil, and Environmental Sciences, 2000.


Shields, Todd G. – B.A. (Miami University), M.A., Ph.D. (University of Kentucky), Associate Professor of Political Science, 1994, 1999.


Siebenmorgen, Terrence J. – B.S.Ag.E. (University of Arkansas), M.S.Ag.E. (Purdue University), Ph.D. (University of Nebraska), P.E., Professor of Food Science, 1984, 1999; Adjunct Professor of Chemical Engineering, 2004.

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Silberman, Jeffrey D. – B.S., M.A. (Southern Methodist University), M.S. (Louisiana State University Medical Center), Ph.D. (University of Miami), Assistant Professor of Biological Sciences, 2004.

Singh, Surendra P. – B.Sc., M.Sc. (Banaras Hindu University, India), M.A., Ph.D. (University of Rochester), Professor of Physics, 1982, 1992.


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Sloan, David Andrew – B.A. (University of California), Ph.D. (University of California-Santa Barbara), Associate Professor of History, 1967, 1978.


Smith, Bob – B.S. (St. John's University, New York), M.S., Ph.D. (University of Michigan), Professor of Chemistry and Biochemistry, 2000.

Smith, Brent L. – B.A. (Ouachita Baptist University), M.A., Ph.D. (Purdue University), Professor of Sociology, 2003.

Smith, Kathleen R. – B.S. (The Ohio State University), M.S. (University of Arkansas), Instructor of Human Environmental Science, 1999.

Smith, Kenneth K. – B.S. (Stephen F. Austin State University), M.Ed., (Sam Houston State University), Ph.D. (Oklahoma State University), Professor of Crop, Soil, and Environmental Sciences, 1999.

Smith, Kimberly – B.S. (Tufts University), M.S. (University of Arkansas), Ph.D. (Utah State University), Professor of Biological Sciences, 1981, 1992.

Smith, Korydon H. – B.P.S., M.Arch. (State University of New York - Buffalo), Assistant Professor of Architecture, 2002.

Smith, Lindsley A. – B.A., M.A. (University of West Florida), J.D. (University of Arkansas), Research Assistant Professor of Communication, 2002.

Smith, Rodney E. – B.S. (University of Oregon), M.S. (Naval Postgraduate School), Ph.D. (University of California, Irvine), C.P.A., Assistant Professor of Accounting, 2000.


Smith, Tom E.C. – B.S.E., M.Ed. (University of Mississippi), Ed.D. (Texas Tech University), Professor in Curriculum and Instruction, 2002.

Smith-Blair, Nan – B.S.N. (Texas Christian University), M.S.N. (Northwestern University, Louisiana), Ph.D. (University of Kansas), Assistant Professor in Nursing, 1993, 2001.

Smith-Nix, Angela R. – B.S.E., M.S.E. (Arkansas State University), Ph.D. (University of Arkansas), Clinical Assistant Professor in Kinesiology, 1990, 2000.

Snyder, Tamara – B.S. (University of California - Los Angeles), M.S. (University of Arkansas), Assistant Professor of Physics, 2001.


Spicer, Thomas O. III – B.S.Ch.E., M.S.Ch.E., Ph.D. (University of Arkansas), Professor of Chemical Engineering, 1984, 1996.

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Spradley, J. Ples – B.S. (Hendrix College), M.S. (University of Arkansas), Associate Professor of Plant Pathology and Extension Pesticide Specialist, 1984, 2003.


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Stapp, Robert – B.S.B.A. (Oklahoma City University), M.S., Ph.D. (Oklahoma State University), Clinical Associate Professor of Economics, 1995.

Starks, Tricia – B.A. (University of Missouri), M.A., Ph.D. (Ohio State University), Assistant Professor of History, 2000.

Starling, A. Gregory – B.S.E.E., M.S., Ph.D. (University of Arkansas), Professor of Computer Science and Computer Engineering, 1985.

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Steelman, C. Dayton – B.S., M.S., Ph.D. (Oklahoma State University), Professor of Entomology, 1983.

Stegman, Charles E. – B.A. (St. Mary's College), M.A., Ph.D. (University of Missouri-Kansas City), Professor of Educational Foundations, 1995.

Steimla, Donald C. – B.S. (University of Arkansas), M.S. (University of Arkansas at Little Rock), Clinical Assistant Professor of Social Work, 2001.


Stephen, Frederick M. – B.A. (San Jose State University), Ph.D. (University of California, Berkeley), University Professor of Entomology, 1974, 1992.


Stephenson, Daniel O. IV – B.S., M.S. (Auburn University), Ph.D. (University of Arkansas), Research Assistant Professor of Crop, Soil, and Environmental Sciences, 2005.

Stephenson, Steven – B.S. (Lynchburg College), M.S., Ph.D. (Virginia Polytechnic Institute and State University), Research Professor of Biological Sciences, 2003.


Stewart, Gay B. – B.S. (University of Arizona), M.S., Ph.D. (University of Illinois - Urbana-Champaign), Associate Professor of Physics, 1994, 2000.

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Stockdell, Richard – B.S. (Northwest Missouri State University), M.A. (Kansas State University), Associate Professor of Journalism, 1980, 1986.

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Swartwood, Larry D. – B.A. (Southern Colorado State College), M.F.A. (University of Colorado), Visiting Assistant Professor of Art, 1993.


Szakasits, Monica – B.A. (Sam Houston State University), J.D. (Baylor University), M.S.L.I.S. (University of Texas), Associate Librarian, Law, 2004.

Szalanski, Allen L.–B.S.A. (University of Manitoba), M.S. (Kansas State University), Ph.D. (University of Nebraska), Assistant Professor of Entomology, 2001.

Tacker, Phil – B.S., M.S. (University of Arkansas), Research Associate Professor of Biological and Agricultural Engineering, 1995

Takigiku, Susan K. – B.A. (University of Colorado), M.S. (Miami University, Ohio), Ph.D. (Purdue University), Assistant Professor of Human Environmental Sciences, 2001.

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Tarvin, Timothy R. – B.A. (Hendrix College), J.D. (University of Arkansas), Clinical Associate Professor of Law, 1993, 2002.


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TeBeest, David O. – B.S. (Wisconsin State University), M.S., Ph.D. (University of Wisconsin), University Professor of Plant Pathology, 1975, 2003.

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Thibado, Paul M. – B.S. (San Diego State University), Ph.D. (University of Pennsylvania), Associate Professor of Physics, 1996, 2000.

Thoma, Gregory J. – B.S.Ch.E., M.S.Ch.E. (University of Arkansas), Ph.D. (Louisiana State University), Associate Professor of Chemical Engineering, 1993, 1999.

Thomas, Deborah W. – B.A. (Centenary College), J.D. (Vanderbilt University), M.S.A. (University of Arkansas), C.P.A., Associate Professor of Accounting and the Nolan E. Williams Lectureship in Accounting, 1983, 1993.

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Toner, Mary Ann – B.S., M.S. (University of Wyoming), Ph.D. (University of Oklahoma), Associate Professor of Communication Disorders, 1990, 1996.

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Tullis, Jason – B.S. (Brigham Young University), M.S., Ph.D. (University of South Carolina), Assistant Professor of Geography, 2004.

Tung, Chao-Hung S. – B.S.M.E. (National Taiwan University), M.S.M.E., Ph.D. (University of Houston), Associate Professor of Mechanical Engineering, 2000, 2005.


Turner, Lori W. – B.S. (Florida State University), M.S. (Florida International University), M.S. (Florida State University), Ph.D. (University of Alabama), Associate Professor of Health Science, 1997, 2002.


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Ulrich, Richard K. – B.S.Ch.E. (University of Texas), M.S.Ch.E. (University of Illinois), Ph.D. (University of Texas, Austin), P.E., Professor of Chemical Engineering, 1987, 1995.


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Varadan, Vasundara – B.Sc., M.Sc. (University of Kerala, Cochin, India), M.S., Ph.D (University of Illinois), Distinguished Professor of Electrical Engineering, 2005.


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Vitale, Davide – Diploma in Architecture (University of Rome), M.Arch. (Harvard Graduate School of Design), Professor of Architecture, 1985, 1997.


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Wang, Gangqiang – M.S. (Chongqing University), Ph.D. (Tsing Hua University), Assistant Professor of Electrical Engineering, 2001.


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Warnock, Mary M. – B.A. (Texas Christian University), M.S., Ph.D. (Texas Woman’s University), Professor of Human Environmental Sciences, 1976, 1996.

Warren, Kimberly – B.S. (Virginia Polytechnic Institute and State University), M.S., Ph.D. (North Carolina State University), Assistant Professor of Civil Engineering, 2002.


Warren, W. Dale – B.S. (Austin Peay State University), M.M. (University of Kentucky), Associate Professor of Music, 1991.

Watkins, Bradley – B.S., M.S. (University of Arkansas), Ph.D. (Oklahoma State University), Research Assistant Professor of Agricultural Economics, 2002.

Watkins, Patsy – B.A., M.A. (University of Texas, Austin), Ph.D. (University of Iowa), Associate Professor of Journalism, 1984, 1992.


Watson, Douglas – B.S. (Gallaudet College), M.S. (Southern Illinois University), Ph.D. (Florida State University), Professor of Rehabilitation Education, 1982, 1984.


Webb, Jennifer D. – B.S., M.S. (University of Tennessee), Ph.D. (Oklahoma State University), Associate Professor of Interior Design, 1999, 2005.


West, Charles P. – B.S., M.S. (University of Minnesota), Ph.D. (Iowa State University), Professor of Crop, Soil, and Environmental Sciences, 1984, 1995.

West, Elliott – B.J. (University of Texas, Austin), M.A., Ph.D. (University of Colorado), Distinguished Professor of History, 1979, 2000.

West, Leon – B.S. (University of Arkansas), Ph.D. (Florida State University), P.E., Professor of Mechanical Engineering, 1982, 1990.

West, Timothy – B.S.B.A., MAcc. (University of Missouri), Ph.D. (University of Tennessee), Associate Professor and the BKD Lectureship in Accounting, 2002.

Whan, Mary Margaret (Peggy) – B.S.Ed. (Northwest Missouri State University), M.S. (University of Nebraska), Ph.D. (Purdue University), Professor of Human Environmental Sciences, 1988.


White, Donald D., Jr. – B.S.B.A., M.A. (Central Missouri State College), Ph.D. (University of Nebraska), Professor of Management, 1971, 1981.

White, John A. – B.S.I.E. (University of Arkansas), M.S.I.E. (Virginia Polytechnic Institute), Ph.D. (The Ohio State University), Chancellor and Distinguished Professor of Industrial Engineering, 1997.

Wicks, Jan LeBlanc – B.A. (University of Southwest Louisiana), M.A., Ph.D. (Michigan State University), Associate Professor of Journalism, 1994, 2000.


Wideman, Robert F. – B.A. (University of Delaware), M.S., Ph.D. (University of Connecticut), Professor of Poultry Science, 1993.

Widick, J. Darel – B.S.A. (University of Tennessee), M.S., Ph.D. (University of Arkansas), Research Assistant Professor of Agronomy, 1982.

Wiedemann, Robert – B.S., Ph.D. (Purdue University), Professor of Entomology, 2005.


Wilke, Stephen B. – B.S. (Middle Tennessee State University), J.D., M.P.A. (University of Memphis), Visiting Assistant Professor of Operations Management, 1996.

Wilkins, Charles L. – B.S. (Chapman College), Ph.D. (University of Oregon), Distinguished Professor of Chemistry and Biochemistry, 1998.

Williams, Brent – B.A. (Austin College), M.S. (University of Texas Southwestern Medical Center - Dallas), Ph.D. (University of Illinois at Urbana-Champaign), Assistant Professor, 2002.

Williams, Doyle Z. – B.S. (Northwestern State University of Louisiana), M.S., Ph.D. (Louisiana State University), C.P.A., Dean Emeritus, Professor of Accounting, and the Doyle Z. and Maynette Derr Williams Chair in Professional Accounting, 1993.

Williams, Nathan L. – B.A. (Pennsylvania State University), M.A., Ph.D (George Mason University), Assistant Professor of Psychology, 2002.

Williams, Patrick G. – B.A. (University of Texas), M.A., Ph.D. (Columbia University), Assistant Professor of History, 2000.

Williams, Rodney – B.S.C.E., M.S.C.E., Ph.D. (University of Arkansas), Adjunct Assistant Professor of Civil Engineering, 2000.

Williams, Stacy – B.S.C.E., M.S.C.E., Ph.D (University of Arkansas), Assistant Professor of Civil Engineering, 2001.


Wilson, C. E. Jr. – B.S.A. (Arkansas State University), M.S., Ph.D. (University of Arkansas), Professor of Crop, Soil, and Environmental Sciences, 1998, 2003.


Wimberly, Jim – B.S., M.S. (Louisiana State University), Adjunct Assistant Professor of Biological and Agricultural Engineering, 1999.

Wolf, Duane C. – B.S., M.S. (University of Missouri-Columbia), Ph.D. (University of California, Riverside), University Professor of Crop, Soil, and Environmental Sciences, 1979, 1996.


Worden, Steven K. – B.S., M.A. (Portland State University), Ph.D. (University of Texas, Austin), Associate Professor of Sociology, 1987, 1993.

Worrell, Diane Featherston – B.S., M.S.W., M.L.S. (Louisiana State University), Ph.D. (Texas Woman’s University), Adjunct Assistant Professor and Adjunct Assistant Librarian, 2005.

Xiao, Min – B.S. (Nanjing University), Ph.D. (University of Texas), Professor of Physics, 1990, 1998.

Yang, Song – B.A. (Branch College of Nankai, China), M.A. (Nankai University, China), Ph.D. (University of Minnesota), Assistant Professor of Sociology, 2002.

Yang, Yinong – B.S. (Hangzhou University, P.R. China), M.S. (University of South Florida), Ph.D. (University of Florida), Associate Professor of Plant Pathology, 1997, 2002.

Zeng, Ka – B.A. (Foreign Affairs College, Beijing), M.A. (Virginia Polytechnic Institute and State University), Ph.D. (University of Virginia), Assistant Professor of Political Science, 2000.

Ziegler, Joseph A. – B.A. (St. Mary’s College), Ph.D. (University of Notre Dame), Professor of Economics, 1973, 1980.

Ziegler, Susan – B.S. (University of Massachusetts-Amherst), Ph.D. (University of Texas), Assistant Professor of Biological Sciences, 1999.


Yeager, Milton P. – B.S. (University of Southern Mississippi), M.S. (University of Arkansas), Visiting Assistant Professor of Operations Management, 1989.


Zou, Min – B.S.A.E., M.S.A.E. (Northwestern Polytechnical University), M.S.M.E., Ph.D. (Georgia Institute of Technology), Assistant Professor of Mechanical Engineering, 2003.

Zou, Tim Jiping – B.A. (Shandong University), M.S., Ph.D. (University of Illinois, Urbana-Champaign), Associate Professor and Associate Librarian, 2004.
Glossary

**Academic Warning.** A status resulting from unsatisfactory grades.

**Act 1052/467.** Section 21 of Arkansas Act 467 of 1989 specifies that all first-time entering freshmen who are enrolled in a bachelor’s degree program will be placed in either college-level credit courses in English and mathematics or developmental courses in English composition, reading, and mathematics on the basis of their scores on specified tests. See Orientation and Registration.

**Advance Registration.** A period of time scheduled during a regular (fall or spring) semester that allows currently enrolled students to register for the next regular semester. In addition, advance registration for the summer sessions is scheduled during the spring semester.

**Audit.** To take a course without credit.

**Adviser.** A faculty member assigned to a student to advise that student on academic matters that include degree requirements and selection of courses.

**Class Schedule.** List of courses and sections for a specific semester, including names of instructors; day, hour, and place of class meetings; and detailed registration procedures. Commonly referred to as the “Racing Form.”

**College or School.** One of eight major divisions within the University that offers specialized curricula.

**Concentration.** A sub-set of a major’s requirements leading to a graduate or bachelor’s degree.

**Consent.** A prerequisite that requires the student to obtain approval from the instructor or the department before he or she will be allowed to register for the course.

**Corequisite.** A course that must be taken at the same time as the course described.

**Course.** A unit of academic instruction.

**Course Deficiencies.** Lacking required units of study in high school. See Admission chapter.

**Course Load.** The number of semester credit hours a student may schedule in a given term.

**Cumulative Grade-Point Average.** An average computed by dividing the total number of grade points earned by the total number of credit hours attempted in all courses for which grades (rather than marks) are given.

**Curriculum.** A program of courses comprising the formal requirements for a degree in a particular field of study.

**Degree Program.** A complete course of study inclusive of all University, college, and departmental requirements.

**Department.** Division of faculty or instruction within a college, such as Department of Accounting within the Sam M. Walton College of Business Administration.

**Drop/Add.** Official dropping or adding of courses for which students are registered during specified times as published in the schedule of classes.

**Elective.** A course not required but one that a student chooses to take.

**Equivalent.** A course allowed in place of a similar course in the same academic discipline. May require approval by an academic dean.

**Fees.** Charges, additional to tuition, which cover specific University services, programs, facilities, activities and/or events. See the Fee and Cost Estimates chapter of this catalog for a full list of fees.

**Grade Points.** Points per semester hour assigned to a grade (not a mark), indicating numerical value of the grade. The grade-point average indicates overall performance and is computed by dividing the total number of grade points earned by the number of semester hours attempted.

**Grade Sanction(s).** A penalty for academic dishonesty. Grade sanctions may consist of either a grade of zero or a failing grade on part or all of a submitted assignment or examination or the lowering of a course grade, or a failing grade.

**Hazing.** Any activity that is required of an individual that may cause mental or physical stress and/or embarrassment when in the process of joining or belonging to any organization.

**Laboratory.** Descriptive of work other than class work, such as experimentation and practical application.

**Lecture.** A class session in which an instructor speaks on a specific topic.

**Major.** A main or primary discipline in which a student completes a designated number of courses and hours of credit.

**Minor.** A second discipline or area of study in which a student concentrates in addition to the student’s major; each approved minor requires a minimum of 15 hours in a designated discipline.

**Noncredit Course.** A course for which no credit is given. (Some credit courses will not count toward degrees.)

**Overload.** A course load of more semester hours than a student is normally permitted to schedule in a given period.

**Prerequisite.** A course or requirement that must be completed before the term when the described course is taken.

**Registration.** Enrollment at the beginning or prior to the beginning of a semester, including selection of classes and payment of fees and tuition.

**Registration Fee.** A fee paid by all students who register for classes.

**Sanction(s).** The penalty for noncompliance to a policy. Usually a response that will redirect the individual or group’s inappropriate behavior, encourage responsible judgment and ethical reasoning, protect the community’s property and rights, and affirm the integrity of the institution’s conduct standards.
Glossary

Section. A division of a course for instruction. A course may be taught in one or more sections or classes or at different times, depending on enrollment in the course.

Semester Credit Hour. Unit of measure of college work. One semester credit hour is normally equivalent to one hour of class work or from two to six hours of laboratory work per week for a semester.

Student Number. A number given to each student as a permanent identification number for use at the University.

Summer Sessions. Periods of time during the summer when course work is offered. (See the calendar or the summer class schedule for specific times and dates.)

Suspension. A status in which students are not permitted to register for courses for a specified time period.

Syllabus. An outline or summary of the main points of a course of study, lecture, or text.

Transcript. A copy of a student’s academic record, mainly intended for communicating information from one institution to another.

Tuition. The charge for University enrollment and registration, calculated per credit hour each semester. Tuition rates may vary depending on a student’s resident status, undergraduate or graduate standing, and college affiliation. Tuition does not include cost of room and board. Additional charges will apply depending on student status (see entry for Fees).

Undeclared Major. Designation indicating students who have not selected a major.

Undergraduate Study. Work taken toward earning an associate or a baccalaureate degree.

Withdrawal. Official withdrawal from all courses during a semester at the University.
## Course Descriptions

### How to Read a Course Description

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University of Arkansas, Fayetteville
**Course Descriptions**

HOW TO READ A COURSE DESCRIPTION

Courses listed in this section describe all courses approved for offering at the University of Arkansas. The courses are listed alphabetically by code. The word “course” refers to a unit of academic instruction. While the word “class” refers to a course scheduled during a semester or summer session with a certain number of prescribed meetings each week. Successful completion of a class usually earns a specified number of semester hours of credit toward a degree.

The Schedule of Classes lists classes available in a specific semester, along with the instructor of record, time and place the class is being held.

**COURSE DESCRIPTION EXPLANATIONS**

A course listing is comprised of the following elements, in order:

- **Course Prefix:** This alpha descriptor is the first identifying part of a course. This four-digit code represents the course prefix name. Usually the course prefix will be the same as the department offering the course, occasionally the prefix is one of many different courses offered in a single department. For example, ARAB refers to Arabic courses, which are offered through the department of foreign languages.

- **Course Number:** Each course is designated by a four-digit number. The first digit identifies the level of the course: 1, freshman level; 2, sophomore level; 3 and 4, junior- senior level; 5, 6, and 7, graduate level. Any exceptions to this practice are stated in the course descriptions.

- **Course Name:** Students desiring admission to courses offered at levels beyond their standing should request the instructor’s permission to enroll. (For definitions of academic standing see Student Standing on page 28.)

- **Course Description:** The second and third digits of the number identify the course within the department that offers it. The fourth digit identifies the semester-hour value of the course. Credit for certain courses does not count toward some degrees (see Courses that Do Not Count Toward Degrees on page 27.)

- **Restrictions:** Normally, courses meet once each week for 50 minutes for each hour of course credit. Laboratory, drill and other kinds of activity courses typically meet for two 50-minute periods per week for each hour of credit.

The letter ‘V’ is used in place of the last digit for those courses in which credit is variable. The minimum and maximum credit hours possible are given in parentheses after the course title.

The first three digits of the number are the same for corequisite courses (for example, the lecture course, and the corequisite lab or drill).

- **Course Suffix:** A suffix to the course number further identifies the specific type of instruction:
  - D - Drill or Discussion
  - L - Laboratory
  - H - Honors Course
  - E - Honors Drill or Discussion
  - M - Honors Laboratory

A course with no suffix is a typical lecture course (not an honors course).

- **Course Title:** The title of the course is printed in bold letters.

- **Course Semester Offering:** Also inside the parentheses following the course title are letters indicating which semester the course is normally offered. Cross-check with the Schedule of Classes to determine if a course is being offered. Courses marked (SP) will be offered in the spring, courses marked (FA) will be offered in the fall, courses marked (SU) will be offered in the summer, and courses marked (I or IR) will be offered irregularly.

- **Course Description:** A brief description of the course content and its major emphasis are stated. If the course is cross-listed (also offered under another course number) a “Same As” statement will be included in the description. If the course is eligible to be repeated for degree credit more than once, a statement will appear to indicate the total hours or times a course may be repeated. If no repeated statement is listed, the course may be used for degree credit only once.

- **Prerequisites:** Requisites are requirements that must be fulfilled either before a course may be taken or at the same time a course is taken. Prerequisites are courses or requirements that must be completed prior to enrolling in a certain course. Courses may have prerequisites from inside and outside the department. It is the student’s responsibility to make sure he/she has completed the proper prerequisites before enrolling in any class. Courses listed as corequisite are to be taken in the same semester as the course desired.

- **Corequisites:** Pre- or corequisites are requirements that if not taken prior to enrolling in a course, must be taken during the same semester as the course.

Students may not enroll in courses for which they do not have the necessary prerequisites. Students who are in doubt concerning their eligibility for entry into specific courses should consult their academic adviser. Students may be dropped from courses for which they do not have the necessary prerequisites.

**African American Studies (AAST)**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
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<tr>
<td>AAST3013</td>
<td>Accounting View of Economic Events (Sp, Fa)</td>
<td>This course examines the relationship between economic events and the accounting view of those events. It explores the information that is captured by various account- ing models and information that is ignored. The course emphasizes business processes, double entry account- ing, and computer-based accounting information systems. Prerequisite: WCOB 1023.</td>
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<tr>
<td>AAST3533</td>
<td>Accounting Technology (Sp, Fa)</td>
<td>This course provides an overview of accounting information systems and illustrates the importance of technology to accountants. Students are exposed to a variety of information technologies including manual, file-oriented, and database systems. The relative advantages and disadvantages of each type of system are highlighted and discussed. Corequisite: ACCT 3721L. Prerequisite: ACCT 3013 with a grade of “C” or better.</td>
</tr>
<tr>
<td>AAST3613</td>
<td>Managerial Uses of Accounting Information (Sp, Fa)</td>
<td>This course is designed to develop the necessary skills and knowledge for the analysis and interpretation of corporate financial statements. In order to effectively evaluate financial statement information, students must have a thor- ough understanding of the corporate business environment, as well as the accounting principles underlying financial reporting. Prerequisite: ACCT 3013 or ACCT 3721L, each with a grade of “C” or better.</td>
</tr>
<tr>
<td>AAST4003H</td>
<td>Accounting Honors Colloquium (Irregular)</td>
<td>Explores events and/or new develop- ments in the field of accounting. Prerequisite: Senior standing.</td>
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<tr>
<td>AAST410V</td>
<td>Special Topics in Accounting (Irregular) (1-3)</td>
<td>Explore current events, concepts and new developments relevant to Accounting not available in other courses. Prerequisites: WCOB 2013 and WCOB 2023 and WCOB 2033 and WCOB 2043 each with a grade of “C” or better. May be repeated for 99 hours.</td>
</tr>
<tr>
<td>AAST4673</td>
<td>Product, Project and Service Costing (Sp, Fa)</td>
<td>Cost systems with emphasis on information generation for cost management of products, projects and services. Prerequisite: ACCT 3533 and ACCT 3613 each with a grade of “C” or better.</td>
</tr>
<tr>
<td>AAST4753</td>
<td>Generally Accepted Accounting Principles (Sp, Fa)</td>
<td>The origins, uses, and application of generally accepted accounting principles. Emphasizes researching technical accounting pronouncements for appli- cation to external financial reporting issues. Prerequisite: graduate standing or ACCT 3723 with a grade of “C” or better.</td>
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<tr>
<td>AAST4963</td>
<td>Operational Auditing (Sp, Fa)</td>
<td>The audit of efficiency, effectiveness, and performance of business and nonprofit entities. Includes coverage of performance auditing techniques and application of these techniques to financial and nonfinancial functions. Prerequisite: senior standing, WCOB 3016 and completion of all junior-level BA core and completion of junior-level accounting courses with a grade of “C” or better.</td>
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<tr>
<td>AAST5223</td>
<td>Accounting for Supply Chain &amp; Retail</td>
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organizations (Fa) highlights the role played by accounting in managing supply chains and retail operations. Provides tools for managing cost flows, including accounting for indirect costs, operational and capital budgeting. Focuses on improving decision making processes, and linking the impact of retail/supply chain decisions to financial statements and shareholder value. May be repeated.

ACCT5413 Accounting Issues for Restructurings (Fa) integrated course which examines the financial reporting, tax, regulatory, and operational aspects of major corporate restructurings arising from events such as mergers, acquisitions, spinoffs, reorganizations, and downsizing. Prerequisite: ACCT 4753 with a grade of "C" or better. ACCT5423 Fraud Prevention and Detection (Fa) An examination of various aspects of fraud prevention and detection, including the sociology of fraud, elements of fraud, types of fraud involving accounting information, costs of fraud, use of controls to prevent fraud, and methods of fraud detection. Prerequisite: MBA 5112 and MBA 5122 and ISYS 2263 with a grade of "C" or better. ACCT5443 Asset Management (Sp) Acquisition and management of inventories, tangible capital assets, and intangible assets. Included are issues such as acquisition processes, internal controls, system requirements, accounting measurements, inventory models, re-engineering, capital budgeting, and management. Prerequisite: MBA 5112 and MBA 5122 and ISYS 2263 each with a grade of "C" or better. ACCT5463 Contemporary Accounting Issues (Sp) Focuses on emerging issues in accounting, tax, audit, international accounting, and education. Prerequisite: ACCT 5433. ACCT5479V Special Topics in Accounting (Sp, Su, Fa) (1-3) Seminar in current topics not covered in other courses. Course of 1 to 3 hours each for a different topic and instructor. May enroll in one or more units. May be repeated for 3 hours. ACCT5523 Advanced Accounting Information Systems (Fa) Cross-disciplinary course designed to acquaint students with new developments and trends in technologically advanced environments. Controls and other technical design considerations are described for the input, processing, storage, and reporting of accounting information. Special emphasis will be placed on systems and artificial intelligence applications in financial accounting, auditing, and tax and also receive considerable attention. Prerequisite: MBA 5112 and MBA 5122 and ISYS 2263 with a grade of "C" or better. ACCT5633 Accounting Research Seminar I (Sp) Course content reflects recent developments in the literature and specific interests of participants. Examples of potential topics include research methods in accounting, financial accounting, managerial accounting, behavioral accounting, tax, audit, international accounting, and education. Prerequisite: ACCT 6033. ACCT700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy. 

Adult Education (AED)

AED5113 Adult Learner: The Later Years (Sp, Su, Fa) Directed toward college students who are most likely to interact with older adults in a learner setting. Emphasis is on understanding the educational needs, wants, and characteristics of older learners so that appealing, valuable, and efficient instruction can be developed.

AED5123 Nontraditional Student (Sp, Su, Fa) An overview of activities that could ultimately promote greater access and success for adult learners with higher education. AED5213 Teaching Reading to Adults (Sp, Su, Fa) A practically-oriented course enabling the ADED/GED teacher to improve the reading program by developing skill in the identification of the reading difficulties of adult students and in the use of suitable strategies for helping these adults overcome their difficulties. Emphasis on diagnostic-prescriptive reading instruction and will include the following main components: the adult as a learner; assessing reading needs in adult basic education; and developing reading skills for the adult learner. 

AED5303 Contemporary Issues in Adult Education (Sp, Su, Fa) Examines issues of methodology, theory, methods, and research currently emerging in the field of adult education. Discussion focuses on topical issues as they appear in the professional publications. AED5506V Honors Workshop (Sp, Su, Fa) (1-18) May be repeated for 18 hours. AED574V Internship (Sp, Su, Fa) (1-18) May be repeated for 18 hours. AED700V Doctoral Dissertation (Sp, Su, Fa) (1-18) 

Air Force ROTC (AERO)

AERO1011 The Foundations of the United States Air Force I (Sp, Su) A survey course designed to introduce cadets to the mission of the United States Air Force and Air Force Reserve Officer Training Corps. Topics include: mission and organization of the Air Force, officerhip and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills. Leadership Lab mandatory for cadets. Corequisite: Lab component. AERO1021 The Foundations of the United States Air Force II (Sp) A survey course designed to introduce cadets to the United States Air Force and Air Force Reserve Office Training Corps. Topics include: mission and organization of the Air Force, officerhip and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills. Leadership Lab mandatory for cadets. Corequisite: Lab component. AERO2011 The Evolution of Air and Space Power I (Fa) A historical survey of air and space power, from the first balloons and dirigibles to the global positioning systems of the Persian Gulf War. Historical examples illustrate the development of Air Force capabilities and missions. Additional topics: Principles of War and Tenets of Air and Space Power. Leadership Lab mandatory for cadets. Corequisite: Lab component. AERO2021 The Evolution of Air Power II (Sp) A historical survey of air and space power, from the first balloons and dirigibles to the global positioning systems of the Persian Gulf War. Historical examples illustrate the development of Air Force capabilities and missions. Additional topics: Principles of War and Tenets of Air and Space Power. Leadership Lab mandatory for cadets. Corequisite: Lab component. AERO3013 Air Force Leadership Studies I (Fa) A study of leadership, management fundamentals, professional knowledge, Air Force personnel evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations. Corequisite: Lab component. AERO3023 Air Force Leadership Studies II (Sp) A study of leadership, management fundamentals, professional knowledge, Air Force personnel evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations. Corequisite: Lab component. AERO4013 National Security Affairs and Preparation for Active Duty I (Fa) Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officer and enlisted military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Communication skills are honed within this structure. Corequisite: Lab component. AERO4023 National Security Affairs and Preparation for Active Duty II (Sp) Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officer and enlisted military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Communication skills are honed within this structure. Corequisite: Lab component. 

Agri, Food & Life Sciences (AFLS)

AFLS101H1 Honors Orientation (Fa) The course will serve as an introduction to the basic information and require- ments of the AFSL Honors Program. The course is available to all students, but is required for students in the honors pro- gram. Topics covered will include: purpose and organization of the honors program, course requirements, research and creative opportunities, responsibilities, and communica- tion exercises. Recitation 3 hours per week for the first 5 weeks of the semester. (Same as AFLS 101) AFLS1011 Freshman Orientation (Fa) An orienta- tion to academic expectations and opportunities, resources, and career exploration in agricultural, food and life sciences. Lecture two days a week during the first eight weeks of the semester. (Same as AFLS 101H). AFLS102VH Honors Special Topics for Freshmen (Irregular) (1-6) Topics not covered in other courses or in-depth study of a particular topic. Usually offered with the program for Beginning Scholars and the Honors Program. Must be in Honors program to register for this course. AFLS5203 Introduction to Global Agricultural, Food and Life Sciences (Fa) A cross-disciplinary approach focusing on global environmental resources, animal and crop production, food safety and nutrition, agricultural marketing and merchandising, trade, agricultural policies and culture. Topics also include development of communication, law and information systems in various geographic regions. Lecture 3 hours per week. AFLS5300V Study Abroad (Sp, Su, Fa) (1-24) Open to undergraduate students studying abroad in officially sanctioned programs. May be repeated for 24 hours. Study abroad may include summer internships, special topics coursework abroad and/or directed individual or group study abroad trips of one-to-four weeks duration. May be repeated for 24 hours. 

AERO131H1 Honors: Management and Leadership (Fa) Leadership styles and principles and organizational systems as they relate to professional situations. Recitation 3 hours per week for the first 5 weeks of the
Course Descriptions

Microeconomics (Sp, Fa)
Theory and mechanics of commodity futures and options markets including trading, margin, fees, etc. Price relationships between cash, futures and options. Fundamental and technical analysis applied to the strategic, hedging, and arbitrage strategies for grain farmers, country elevators, soybean crushers, poultry firms, etc. Spreadsheets and statistical techniques are used to develop optimal hedging relationships.
Pre-requisites: AGEC 2403 Advanced Farm Business Management (Irregular) Principles and procedures of decision making as applied to the allocation of resources in the farm business for profit maximization. Emphasis is placed on use of principles of economics and their application to the decision making process. Includes exercises on the application of principles to specific farm management problems. Prerequisite: AGEC 3403 and AGEC 2903 or equivalent.

Agricultural Economics (AGEC)

AGEC1103 Principles of Agricultural Microeconomics (Sp, Fa) Introduction to agricultural economics, including a survey of the role and characteristics of agriculture businesses in our economic system. Basic economic concepts concerning price determination, profit maximization, and resource use are emphasized. The use of economic principles as applied to the production and marketing decisions made by managers of agricultural firms is demonstrated. MATH 1025 or equivalent.

AGEC2103 Principles of Agriculture Macroeconomics (Sp, Fa) Applications of economics principles to problems of agricultural production, distribution, and income; including a study of the interrelationship between agriculture and other segments of the economy; and the dynamic forces in the economy which affect agriculture. Pre-requisites: MATH 1025. (Same as AGEC 2103)

AGEC 43 Financial Records (Fa) Principles of small agricultural business management accounting practices are taught to allow students to gain hands-on experience with financial record keeping for a business. Resulting financial statements are analyzed to determine opportunities for enhancing financial efficiency. Prerequisites: AGEC 2103 or equivalent.

AGEC3373 Advanced Price Risk Management (Sp) Surveys consumer trends in food markets and the marketing activities of the food and fiber system. Emphasizes marketing concepts will be used to analyze real world marketing situations. Case studies will be used to demonstrate the role that demand analysis and consumer behavior play in market management. Prerequisites: AGEC 2503 and AGEC 3033.

Agricultural and Food Policies (Sp, Su, Fa) Examines public policy in terms of rationale, content, and consequences. Economic framework used to assess policies to improve competitive structure, operation, and performance of U.S. and international food and agriculture. Farm, international trade, resource, technological, and consumer policies analyzed. Prerequisite: AGEC 1103 (or ECON 2023) and AGEC 2103 (or ECON 2013).

AGCEC500V Special Problems (Sp, Su, Fa) (1-3) Individual reading and investigation of a special problem in agricultural economics not available under regular courses. Prerequisites: graduate standing.

AGCEC51 Seminar (Sp, Fa) Presentation and discussion of graduate student research. Formal presentations are made by all graduate students. Consideration given to student preference in selection of presentation. Prerequisite: graduate standing.

AGCEC502V Special Topics (Irregular) Advanced studies of selected topics in agricultural economics. Prerequisite: graduate standing.

AGCEC503V Internship in Agricultural Economics (Sp, Su, Fa) (1-3) On-the-job application of skills developed in the M.S. program.

AGCEC513 Principles of Agricultural and Natural Resources Law (Sp) Fundamentals of contract law, torts law, and property law will accompany discussion of various areas of agricultural law: acquisition and disposal of farmland; farm maximization; emphasis is placed on use of principles of economics and their application to the decision making process. Includes exercises on the application of principles to specific farm management problems. Prerequisite: AGEC 3403 and AGEC 2903 or equivalent.

AGCEC41 Agricultural Marketing (Fa) Principles of small agricultural business management accounting practices are taught to allow students to gain hands-on experience with financial record keeping for a business. Resulting financial statements are analyzed to determine opportunities for enhancing financial efficiency. Prerequisites: AGEC 2103 or equivalent.

AGCEC43 Financial Records (Fa) Principles of small agricultural business management accounting practices are taught to allow students to gain hands-on experience with financial record keeping for a business. Resulting financial statements are analyzed to determine opportunities for enhancing financial efficiency. Prerequisites: AGEC 2103 or equivalent.

AGCEC6403 Advanced Agribusiness Management (Irregular) Examines public policy in terms of rationale, content, and consequences. Economic framework used to assess policies to improve competitive structure, operation, and performance of U.S. and international food and agriculture. Farm, international trade, resource, technological, and consumer policies analyzed. Prerequisite: AGEC 1103 (or ECON 2023) and AGEC 2103 (or ECON 2013).

AGCEC500V Special Problems (Sp, Su, Fa) (1-3) Individual reading and investigation of a special problem in agricultural economics not available under regular courses. Prerequisites: graduate standing.

AGCEC51 Seminar (Sp, Fa) Presentation and discussion of graduate student research. Formal presentations are made by all graduate students. Consideration given to student preference in selection of presentation. Prerequisite: graduate standing.

AGCEC502V Special Topics (Irregular) Advanced studies of selected topics in agricultural economics. Prerequisite: graduate standing.

AGCEC503V Internship in Agricultural Economics (Sp, Su, Fa) (1-3) On-the-job application of skills developed in the M.S. program.

AGCEC513 Principles of Agricultural and Natural Resources Law (Sp) Fundamentals of contract law, torts law, and property law will accompany discussion of various areas of agricultural law: acquisition and disposal of farmland; farm maximization; emphasis is placed on use of principles of economics and their application to the decision making process. Includes exercises on the application of principles to specific farm management problems. Prerequisite: AGEC 3403 and AGEC 2903 or equivalent.

AGCEC41 Agricultural Marketing (Fa) Principles of small agricultural business management accounting practices are taught to allow students to gain hands-on experience with financial record keeping for a business. Resulting financial statements are analyzed to determine opportunities for enhancing financial efficiency. Prerequisites: AGEC 2103 or equivalent.

AGCEC43 Financial Records (Fa) Principles of small agricultural business management accounting practices are taught to allow students to gain hands-on experience with financial record keeping for a business. Resulting financial statements are analyzed to determine opportunities for enhancing financial efficiency. Prerequisites: AGEC 2103 or equivalent.

AGCEC6403 Advanced Agribusiness Management (Irregular) Examines public policy in terms of rationale, content, and consequences. Economic framework used to assess policies to improve competitive structure, operation, and performance of U.S. and international food and agriculture. Farm, international trade, resource, technological, and consumer policies analyzed. Prerequisite: AGEC 1103 (or ECON 2023) and AGEC 2103 (or ECON 2013).

AGCEC500V Special Problems (Sp, Su, Fa) (1-3) Individual reading and investigation of a special problem in agricultural economics not available under regular courses. Prerequisites: graduate standing.

AGCEC51 Seminar (Sp, Fa) Presentation and discussion of graduate student research. Formal presentations are made by all graduate students. Consideration given to student preference in selection of presentation. Prerequisite: graduate standing.

AGCEC502V Special Topics (Irregular) Advanced studies of selected topics in agricultural economics. Prerequisite: graduate standing.

AGCEC503V Internship in Agricultural Economics (Sp, Su, Fa) (1-3) On-the-job application of skills developed in the M.S. program.
models. Such topics covered include management of current assets, capital budgeting, capital structure, and institutions involved in agricultural finance. Prerequisite: graduate standing.

AGEC5103 The Economics of Public Policy (Sp) This class will examine the impact of public policy on agricultural markets as well as how policies affect resource adjustments in agriculture and rural communities. Prerequisite: graduate standing.

AGEC5303 Agricultural Marketing Theory (Sp) Survey of the economic principles underlying agricultural and food marketing and consumer behavior. Emphasis is placed on marketing framework as applicable to agricultural and food enterprises. Prerequisite: graduate standing.

AGEC5403 Quantitative Methods for Agribusiness (Fa) Application of quantitative techniques used to support managerial decision-making and resource allocation in agricultural firms. Provides exposure to mathematical and statistical tools (regression analysis, mathematical programming, simulation) used in economic analysis in agriculture. Emphasis is placed on computer applications with a focus on management science and economic theory. Prerequisite: graduate standing.

AGEC5413 Agribusiness Strategy (Sp) Addresses problems of strategy formulation in agribusiness emphasizing current trends and competitive environment of agriculture. Survey of current literature and classic perspectives on strategy with applications to agribusiness. Examines the development of firm level strategies within the structure and competitive environment of agricultural firms and industries. Prerequisite: graduate standing.

AGEC5613 Econometrics I (Fa) Use of economic theory and statistical methods to estimate economic models. The single equation model is examined emphasizing multicollinearity, autocorrelation, heteroskedasticity, binary variables and distributed lags and model specification. Same as ECON 5613. Prerequisite: MATH 2043 and knowledge of matrix algebra, including matrix operations and other basic mathematical and physical science concepts important to econometrics. Biweekly 4 hours per week. Corequisite: AGEC 5013L (for AGEC 5011, AGED 3133 and AGEC 5613).

AGEC600V Doctoral Dissertation (Sp, Su, Fa) (1-6) Prerequisite: graduate standing. May be repeated for 99 hours.

AGEC6432 Teaching Diverse Populations in Agriculture (Even Years, Fa) A course involving activities emphasizing the practical application of planning and teaching strategies for teaching diverse populations as expected to teach. Provides theory and practice in planning and teaching a college-level course.

AGEC6575V Internship in Agricultural Education (Sp, Su, Fa) (1-6) Scheduled practical field experiences under supervision of a professional intern in off-campus secondary school systems. Emphasis includes classroom preparation, teaching, and student evaluation.

AGEC660V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

Agricultural Education (AGED)

AGED1001 Orientation to Agricultural and Extension Education (Fa) Continuation of AGAD 1001, Freshman Orientation, with attention given to sharing of possible solutions to individual problems. Exploration of anticipated collegiate experiences for departmental majors as well as post-graduation opportunities. Student and faculty interaction is stressed. The class meets during the last half of the fall semester twice a week. The class also meets 1 or 2 evenings for up to two hours each time.

AGED102V Special Topics for Freshmen (Irregular) (1-2) Topics not covered in other courses or in-depth, basic, or introductory. Usually taken as a program for Beginning Scholars and the Honors Program. (Same as AGED 102VH) May be repeated for 2 hours.

AGED1031 Introduction to Early Field Experience (Fa) Participation designed to give prospective agricultural education teachers an opportunity to observe and participate in a variety of school settings. Corequisite: CIED 1002.

AGED1112 Agricultural Youth Organizations (Fa) Survey course of agricultural youth organizations including 4-H, FFA, Grange, and others pertaining to membership, awards programs, benefits, and special recognition programs. Lecture and laboratory 2 hours per week.

AGED1313 Methods in Agricultural Education (Fa) Methods and techniques in teaching agriculture at the secondary level. Lecture 2 hours, laboratory 2 hours per week.

AGED1321 Methods and Techniques in Teaching Agriculture (Sp, Su) (2-4) Corequisite: CIED 1002; Corequisite: AGED 1001. Prerequisite: AGED 1001.

AGED1341 Agricultural Communications Lab (Sp, Fa) Corequisite: AGED 3142.

AGED1342 Agri Communications (Sp, Fa) An overview of communications in the agricultural, food and life sciences, including basic communication principles, newswriting, electronic communication and web publishing. Corequisite: AGED 3141L.

AGED1353 Leadership Development in Agriculture (Fall) Focus on personal roles of leadership; development of leadership techniques and skills required when working with organizations; dynamics of group action; methods of resolving conflict; ethical considerations for leaders; and personal skills development. Prerequisite: junior standing.

AGED3942 Professional Development in Agricultural Communications (Even Years, Fa) Overview of professional and technical skills needed to succeed in internships and jobs in the field of agricultural communications.

AGED4003 Issues in Agriculture (Sp, Fa) Lecture and discussion on local, regional, national and international issues related to agricultural policy, ethics, environment, society, and science. Designed for students with at least six hours of upper division agricultural science courses. Prerequisite: graduate standing.

AGED400V Special Problems in Agricultural and Extension Education (Sp, Su, Fa) (1-6) Individual study or research for advanced undergraduates in the field of agricultural and extension education. Prerequisite: graduate standing. May be repeated for 4 hours.

AGED401V Special Topics (Irregular) (1-3) Studies of selected topics in agricultural or extension education not covered in other courses. (Same as AGED 4012, AGED 401VH) May be repeated for 4 hours.

AGED4134 Electronic Communications in Agriculture (Even Years, Sp) An overview of communication technology in the agricultural, food and life sciences. Prerequisite: graduate standing.

AGED432 Teaching Diverse Populations in Agriculture and Extension Education (Sp) This course is designed to provide pre-service teachers of agriculture with an understanding of teaching diverse populations as applied to problems of practice in agricultural and extension education.

AGED475V Internship in Agri Educ (Sp, Su, Fa) (1-6) Scheduled practical field experiences under the supervision of a professional intern in off-campus secondary school systems. Emphasis includes classroom preparation, teaching, and student evaluation. Prerequisite: admission into Clinical Practice. May be repeated for 6 hours.

AGED4843 Methods in Agricultural Laboratories (Sp) Methods and management techniques in all types of agricultural laboratories that may be in a secondary agricultural science program. Emphasis on management of students and facilities, equipment, and materials. Lecture 2 hours, laboratory 4 hours per week. Prerequisite: AGME 2123.

AGED5001 Seminar (Sp) Presentations and discussion of graduate student research as well as review of current literature and topics of current interest by students and faculty. All graduate students will make at least one formal presentation.

AGED5013 Advanced Methods in Agricultural Mechanics (Fa) Emphasis on research and management, organization, and supervision of student unit shop instruction, and development of skills in agricultural mechanics.

AGED5031 Ethics in Agricultural and Extension Education (Fa) A study of ethics as applied to problems of professional practice in agricultural education. Prerequisite: AGME 2123.

AGED5033 Developing Leadership in Agricultural Organizations (Fa) Organizational concepts of leadership; administrative styles and structures; leadership for boards, committees, and other groups and of societal and political processes. Prerequisite: graduate standing.

AGED5053 Philosophy of Agricultural and Extension Education (Sp) An examination and analysis of social and economic events leading to the establishment and maintenance of federal, state, county, and local agricultural education programs. Lecture 3 hours per week. Prerequisite: graduate standing.

AGED5074 Program Management Practicum (Sp) A course involving activities emphasizing the practical application of the body of knowledge pertinent to program management; must be taken in conjunction with AGED 575V. Prerequisite: Admission into the MAT program.

AGED510V Special Problems (Sp, Su, Fa) (1-6) Individual investigation of a special problem in agricultural education which is not available through regular courses. These will be directed by a member of the graduate faculty. Prerequisite: graduate standing.

AGED520V Special Topics in Agricultural and Extension Education (Irregular) (1-4) Topics not covered in other courses or a more intensive study of specific topics in agriculture education. Prerequisite: graduate standing. May be repeated for 9 hours.

AGED5463 Research Methodology in the Social Sciences (Sp) Logical structure and the method of science. Basic elements of research design; observation, measurement, analytic method, interpretation, verification, presentation of results. Applications to research in economic or sociological problems of agriculture and human environmental sciences. Prerequisite: graduate standing. (Same as AGST 5013, HESC 5463, RSCS 5043, RSCS 5463, RSCS 5467, RSCS 5468. Prerequisite: graduate standing.)

AGED5473 Interpreting Social Data in Agriculture (Fa) The development of competencies in analyzing, interpreting and reporting the results of analyses of social science data in agricultural related fields. Students will select appropriate analysis techniques and procedures for various problems, analyze data, and interpret and report the results of statistical analyses in narrative and tabular form. Prerequisite: AGST 4023 (or EDFD 5393) and AGED 5463 or RSCS 5463 or RSCS 5466.

AGED5500 College Teaching in Agriculture and Related Disciplines (Irregular) (1-3) For students who are pursuing graduate degrees who are interested in preparation for a research career, but who also may desire or expect to teach. Provides theory and practice in planning and executing a college-level course.

AGED575V Internship in Agricultural Education (Sp, Su, Fa) (1-6) Scheduled practical field experiences under supervision of a professional intern in off-campus secondary school systems. Emphasis includes classroom preparation, teaching, and student evaluation.

AGED600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

Agricultural Mechanization (AGME)

AGME1611L Fundamentals of Agricultural Systems Technology (AGME) A study of basic mathematical and physical science concepts important in the mechanization of agriculture. Laboratory required for agricultural education, communication and technology majors enrolled in AGME 1613. Optional for others enrolled in AGME 1613. Corequisite: AGME 1613.

AGME1613 Fundamentals of Agricultural Systems Technology (Sp) Introduction to basic physiological concepts important in agricultural technology, applied mechanics, power and machinery management, structures and electrification, and soil and water conservation. Lecture 3 hours per week. Corequisite: AGME 1611L (AGME Majors).

AGME2123 Metals and Welding (Sp, Fa) An introduction to agricultural mechanics shop work to include hot and cold metal work, arc welding, and gas welding and cutting. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component.

AGME2903 Agricultural and Human Environmental Sciences Applications of Microcomputers (Sp, Fa) Lecture and laboratory assignments covering the contemporary use of microcomputers in agricultural research, production, and home economics. Major emphasis placed on learning to use selected, appropriate software packages. Surveys 2 hours per week, laboratory 2 hours per week. (Same as BAST 2903)

AGME3042 Agricultural Construction Technology (Sp) Principles of building design and construction. Includes site selection and calculating structural load requirements, evaluation of selected packages for building design. Safety practices, selection of building materials and determining costs are also included. Lecture is one hour and lab is two hours per week.

Course Descriptions
AGME3131 Small Power Units/Turf Equipment (Sp) Principles of electricity wiring of homes, farmsteads and other agricultural structures; selection of electric motors and their application and maintenance of turf equipment and machinery. Lecture and power units, including various engine systems, service and repair of turf equipment and machinery. Lecture 2 hours per week. Corequisite: AGME 3101L. Prerequisite: MATH 1203.

AGME3153 Surveying in Agriculture and Forestry (Fa) Techniques and procedures normally used in determining areas and characterizing the topography of agricultural and forest lands. Includes basic concepts of surveying; use and care of level, transit, distance measuring equipment; topographic mapping and public land surveys. Lecture and laboratory 6 hours per week. Prerequisite: MATH 1203.

AGME3173 Electricity in Agriculture (Sp) Principles of electricity wiring of homes, farmsteads and other agricultural structures; selection of electric motors and their application and maintenance in the broad field of agriculture; lighting and special uses of electricity such as heating and electrical controls. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: MATH 1203.

AGME400V Special Problems (Sp, Su, Fa) (1-6) Individual research or study in electrification, irrigation, farm power, etc. Prerequisite(s): senior standing. May be repeated for 99 hours.

AGME4011 Senior Seminar (Sp) For agricultural education, communication and technology majors. Covers how to prepare and present projects. May be taken on a current topic, job opportunities, and professionalism. Prerequisite: senior standing.

AGME402V Special Topics in Agricultural Mechanization (Irregular) (1-4) Topics not covered in other courses or in more extensive study of special topics in agricultural mechanization. May be repeated for 99 hours. AGME4203 Mechanized Systems Management (Sp, Su, Fa) Selection, sizing, and operating principles of agricultural mechanized systems, including power and estate systems. Cost analysis and computer techniques applied to planning and management of mechanized systems. Corequisite: Lab component. Prerequisite: Lab component. Prerequisite: MATH 1203.

AGME4973 Irrigation (Odd years, Sp) Methods of applying supplemental water to soils to supply moisture essential for plant growth, sources of water, measurement of irrigation water, pumps, conveyance structure, economics, and irrigation for special crops. Lecture 2 hours, laboratory 3 hours per week. Pre or Corequisite: Lab component. Prerequisite: MATH 1203.

American Studies (AMST)

AMST2003 Introduction to American Studies (Sp) Introduction to American Studies as an interdisciplinary field of study. Examination of a selected topic from various methodological perspectives.

Animal Science (ANSC)

ANSC1001L Introductory to Animal Sciences Laboratory (Fa) Study of facilities used in produc- tion, processing, and management in animal agriculture. Identification, selection and testing of livestock, meat, and milk. Lecture 3 hours per week. Laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: MATH 1203 or higher.

ANSC1005L Laboratory 3 hours and laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: AGST 4011 and (AGST 4023 or STAT 4003).

ANSC102V Special Topics (Irregular) (1-4) Topics not covered in other courses or in more extensive study of specific topics in statistics and related areas. Prerequisite: graduate standing. May be repeated for 99 hours.

ANSC2213 Behavior of Domestic Animals (Fa) Behavior associated with domestication. Effects of selective breeding, physiological and social environments, and development of animals. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: ANSC 1032 for ANSC 2252L. May be repeated for 6 hours.

ANSC2252L Introduction to Livestock and Meat Evaluation (Sp) Develop an understanding between live animal evaluation and carcass composition. Comparative judging including meat evaluation, classification and selection of beef cattle, sheep and swine. Prerequisite: ANSC 1032.

ANSC2304 Equine Behavior and Training (Fa) Psychology and ethology of equine social behavior and how it pertains to learning patterns. Application of fundamental behavioral concepts to training of horses. Students will apply classical, practical, and proven equine training techniques to achieve safe, non-traumatic learning for the horse and trainer. Lecture two hours and laboratory six hours per week. Pre or Corequisite: Lab component. Prerequisite: ANSC 1032.

ANSC2781 Career Preparation and Development (Fa) The importance of preparing for a career in the animal sciences and industries will be continued.

ANSC3003 Applied Animal Parasitology (Fa) The economically important parasites of domestic animals with emphasis on their host relationships and management considerations. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: Lab component. Prerequisite: ANSC 1032.

ANSC3013 Parasitism of Domesticated Non-Herbivores (Sp) Course will provide applied instruction and appreciation for the parasitism of our domesticated animals, including swine, chickens, turkeys, dogs and cats. Prerequisite: ANSC 3003.

ANSC3032 Animal Physiology I (Fa) Fundamental aspects of neural/muscle/bone tissues and the cardiovascular system, the normal structure and functions of these systems will be emphasized. Lecture 2 hours per week. Prerequisite: BIOL 1543 and CHEM 1123 or CHEM 1074. (Same as POSC 3023).

ANSC3042 Animal Physiology II (Sp) Fundamental aspects of renal, respiratory, digestive, and endocrine physiology will be covered. The normal structure and function of these systems will be emphasized. Lecture 2 hours per week. Prerequisite: ANSC 3303 or POSC 3303. (Same as POSC 3042).

ANSC3123 Principles of Genetics (Fa) Fundamentals of genetics, with special emphasis on the genetics of farm animals. Lecture 2 hours per week. Prerequisite: BIOL 1543 and MATH 1203 or higher. (Same as POSC 3123)

ANSC3133 Animal Breeding and Genetics (Sp) Application of the principles of genetics to the breeding of farm animals. Lecture 3 hours per week. Prerequisite: ANSC 1032.

ANSC3143 Principles of Animal Nutrition (Sp) Scientific approach to animal nutrition involving the mecha- nisms through which feed nutrients are utilized by farm animals. Lecture 3 hours per week. Prerequisite: CHEM 1074 and CHEM 1071.

ANSC3151L Applied Animal Nutrition Laboratory (Fa) Practical approach to animal nutrition; use of various methods of feedstuff evaluation and ration balancing for Swine, Poultry, and Ruminants. Laboratory 2 hours per week. Course requirement: ANSC 3152. Prerequisite: ANSC 3143 and MATH 1203.

ANSC3282 Livestock Judging and Selection (Fa) Comparative judging, including grading, classification, and selection of beef cattle, swine, sheep and horses. Oral and written discussion. Laboratory 6 hours per week. Prerequisite: ANSC 1032 or ANSC 2252L.

ANSC3291 Livestock Junior Judging Team Activity (Sp) Training for membership on judging teams, through participation.

ANSC333 Diseases of Livestock (Sp) Introductory study of the diseases of farm animals with emphasis on fundamental principles of disease, body defense mecha- nisms, hygiene, and sanitation. Corequisite: Lab component. Prerequisite: ANSC 3302 and ANSC 3042 and BIOL 2013 and BIOL 2011L.

ANSC3433 Fundamentals of Reproductive Physiology (Fa) Principles of mammalian reproductive physiology with emphasis on oocyte. Lecture 3 hours per week. Prerequisite: ANSC 1032 and BIOL 1543.

ANSC3491 Artificial Insemination of Cattle and Swine (Sp) Experience in artificial insemination of cattle and swine, including semen handling, estrus synchroniza-
ion and detection, and immobilization technique. Laboratory 4 hours per week for 8 weeks. The course is offered the second 8 weeks of the Spring semester. Prerequisite: ANSC 3433.

ANSC3613 Meat Science (Fa) The study of meat sci- ence and muscle biology. Topics will include animal/tissue growth and development in relation to meat quality. Meat processing, preservation, and meat safety concerns will also be considered. Lecture 3 hours per week. Prerequisite: CHEM 2613 or CHEM 3003.

ANSC3723 Bone and Livestock Merchandising (Fa) Valuation and selling programs for specific livestock enterprises will be presented. Students will evaluate the effectiveness of merchandising programs including how to market, advertise, and manage a purebred auction sale of livestock.

ANSC3822 Equine Law (Odd years, Fa) Horse ownership presents unusual, if not unique, legal issues. This course examines the basic underpinnings of commercial transactions in horses, tort liability, business structure, envi- ronmental law and gaming regulation.

ANSC400V Special Problems (Sp, Su, Fa) (1-6) Special problems in the animal sciences for advanced undergraduate students. Prerequisite: consent of instructor.

ANSC410V Internship in Animal Sciences (Sp, Su, Fa) (1-6) Supervised work experience with private or government organizations Prerequisite: junior standing. May be repeated for 6 hours credit.

ANSC410V Special Topics in Animal Sciences (Irregular) (1-4) Topics not covered in other courses or a more intensive study of specific topics in animal sciences. Prerequisite: ANSC 1032. May be repeated for 99 hours.

ANSC4252 Cow-Calf Management (Fa) Systems of cow-calf management including the practical application of the principles of breeding, feeding, and management to commercial and purebred beef cattle under Arkansas conditions. Lecture 1 hour and laboratory 2 hours per week. Prerequisite: ANSC 1032 and ANSC 3143 and ANSC 3133 and ANSC 3432.

ANSC4263 Swine Production (Even Years, Fa) Methods in producing purebred and commercial swine with special emphasis on the management programs needed for profitable pork production in Arkansas. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: ANSC 3123 and ANSC 3133.

ANSC4272 Sheep Production (Odd years, Sp) Purebred and commercial sheep management emphasizing the programs of major importance in lamb and wool produc- tion and detection, and immobilization technique. Laboratory 4 hours per week. Prerequisite: ANSC 3433. The study of meat sci- ence and muscle biology. Topics will include animal/tissue growth and development in relation to meat quality. Meat processing, preservation, and meat safety concerns will also be considered. Lecture 3 hours per week. Prerequisite: CHEM 2613 or CHEM 3003.

ANSC510V Special Topics in Animal Sciences (Irregular) (1-4) Topics not covered in other courses or a more intensive study of specific topics in animal sciences. Prerequisite: graduate standing. May be repeated for 99 hours.

ANSC5123 Advanced Animal Genetics (Even years, Fa) Specialized study of animal genetics. Lecture 3 hours per week. Prerequisite: ANSC 3123. (Same as POSC 5123)

ANSC5133 Quantitative Inheritance (Odd years, Sp) Advanced study of the genetic basis of variation and the genetic theory of populations. Lecture 3 hours per week. Prerequisite: ANSC 3313.

ANSC5143 Biochemical Nutrition (Even years, Fa) Interrelationship of nutrition and physiological chem- istry; structure and metabolism of physiological significant carbohydrates, lipids, and proteins; integration of metabolism with provision of tissue fuels; specie differences in regulatory control of tissue and whole body metabolism of nutrients. Prerequisite: CHEM 3813. (Same as POSC 5152)

ANSC5152 Protein and Amino Acid Nutrition (Even years, Sp) Students will be introduced to the basic processes of protein digestion, amino acid absorption, trans- port, metabolism and utilization in livestock and poultry. Emphasis will be placed on the function of proteins and their dynamic state affect nutritional status for animals and man. Prerequisite: CHEM 3813. (Same as POSC 5152)

ANSC5253 Advanced Livestock Production (Irregular) Comprehensive review of recent advances in research relative to the various phases of livestock produc- tion. Prerequisite: ANSC 4252 (or ANSC 4263) and ANSC 3133 (or ANSC 1032). May be repeated for 99 hours.

ANSC5353 Advanced Hay and Silage Production (Fa) Advanced study of the principles of good hay and silage production. The course includes a detailed review of forage nutritive value followed by an in-depth discussion - manage- ment of forage crops, ruminant use, and the economics of forage production. Prerequisite: ANSC 3123 or POSC 3032 and POSC 3042. (Same as POSC 5353)

ANSC5743L Advanced Analytical Methods in Animal Sciences Laboratory (Fa) Introduction into theory and application of current advanced analytical techniques used in animal research. Two 3-hour laboratory periods per week. (Same as CHEM 3813).

ANSC5763 Protozoan Parasites of Domestic Livestock and Companion Animals (Even years, Fa) Course topics will include economically and medically important protozoan parasites of livestock and companion animals, with an emphasis on their significance for animal and human health. Lecture/discussion 3 hours per week. (Same as ANSC 3153, ANSC 3154, ANSC 3162. Corequisite: CHEM 3813)

ANSC5853 Advanced Meats Technology (Even Years, Su) An intensive study of processed meats, relat- ing the science, technology, and quality of further processed meat and poultry products. Product development, sensory and chemical analysis, microbiology, nutritional aspects, and product labeling are covered. (Same as POSC 5853).

ANSC5891 Seminar (Sp, Su, Fa) Critical review of the current scientific literature pertaining to the field of animal science. Oral reports. Lecture 1 hour per week. Prerequisite: senior standing.

ANSC5922 Neuroscience (Fa) Course covers cellu- lar through neural systems, major brain functions and mechanisms associated with the endocrine system in domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for second 8 weeks of semester). Prerequisite: CHEM 3813. Corequisite: Lab component. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042. (Same as POSC 5932)

ANSC5942 Endocrine Physiology of Domestic Animals (Sp) Endocrine physiology, including mecha- nisms of hormone secretion, function, and regulation. Mechanisms associated with the endocrine system will be discussed for domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for first 8 weeks of semester). Prere- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042. (Same as POSC 5942)

ANSC5952 Respiratory Physiology of Domestic Animals (Sp) Respiratory physiology, including mecha- nisms of lung function and gas exchange. Mechanisms associated with the interaction of the respiratory system with other bodily systems in domestic animals and poultry will be discussed. Lecture 3 hours; drill 1 hour per week for first 8 weeks of semester. Pre- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042. (Same as POSC 5962)

ANSC5972 Renal Physiology (Sp) Renal physiology, including mechanisms of renal clearance with emphasis on renal control mechanisms in domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for second 8 weeks of semester). Prere- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042. (Same as POSC 5972)

ANSC600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

ANSC6143 Minerals in Animal Nutrition (Odd years, Sp) Mineral nutrition, their sources and functions, as related to nutrition of domestic animals. Lecture 3 hours per week. Prerequisite: ANSC 3143 or POSC 4343.

ANSC6243 Ruminant Nutrition (Odd years, Fa) Anatomy and physiology of the rumen. The nutrient require- ments of microbial organisms and the relation of microbial digestion in the rumen to the nutrition of cattle, sheep and other ruminants. Lecture 3 hours per week. Prerequisite: graduate standing.

ANSC6253 Forage-Ruminant Relations (Odd years, Sp) Advanced chemical, physical, and botanical characteristics of forage plants, intake and digestion, and techniques of measuring forage utilization and systems analysis at the plant-animal inter- face. Lecture 3 hours per week. (Same as CES 6253).

ANSC6343 Vitamin Nutrition in Domestic Animals (Even years, Sp) The vitamins required by domestic animals with emphasis upon their role in animal nutrition, physiological functions, and consequences of failure to meet the requirement of the animal. Lecture 3 hours per week. Prerequisite: ANSC 3143 (or POSC 4434) and CHEM 3813. (Same as POSC 6343)

ANSC6833 Reproduction in Domestic Animals (Even years, Sp) Comprehensive review of current theory of reproductive function in domestic animals. Lecture 3 hours per week. Prerequisite: ANSC 3143 (or POSC 4434)

ANSC700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: graduate standing.

Anthropology (ANTH)

ANTH1011M Honors Introduction to Biological Anthropology Laboratory (Fa) Laboratory exercises illustrating concepts of physical anthropology. Corequisite: ANTH 1013. (Same as ANTH 1011L)

ANTH1011L Introduction to Biological Anthropology Laboratory (Fa) Laboratory exercises illustrating concepts of physical anthropology. Corequisite: ANTH 1013. (Same as ANTH 1011M)

ANTH1013 Introduction to Biological Anthropology (Fa) An introduction to the field of
Course Descriptions

**ANTH1023H Honors Introduction to Cultural Anthropology (Sp, Fa)** Introduction to the nature of culture and its influence on human behavior and personality; comparative study of custom, social organization, and processes of change and integration of culture. (Same as ANTH 1023H, ANTH 1023I)

**ANTH3002L Archeological Laboratory (Sp, Fa)** Laboratory exercises illustrating concepts of archeology. Corequisite: ANTH 3023.

**ANTH3023 Introduction to Cultural Anthropology (Sp, Su, Fa)** Introduction to the nature of culture and its influence on human behavior and personality; comparative study of custom, social organization, and processes of change and integration of culture. (Same as ANTH 1023H, ANTH 1023I)

**ANTH3030 World Prehistory (Irregular)** Survey of the prehistoric and early historic cultures of the Americas, Asia, and Africa.

**ANTH3021L Archeology Laboratory (Sp, Fa)** Laboratory exercises illustrating concepts of archeology. Corequisite: ANTH 3023.

**ANTH3023 Approaches to Archeology (Sp, Fa)** Study of the field of archeology including method, theory, analysis and interpretation with substantive worldwide examples.

**ANTH3033 Egyptology ( formerly ANTH 4023)** Explores multiple aspects of Ancient Egyptian civilization including chronology, art, religion, literature and daily life. Prerequisite: corequisite of course.

**ANTH3123 The Anthropology of Religion (Sp)** An exploration of rituals, symbols, and rules that shape religious life. Religion is viewed broadly, considering activities that intersect with and contribute to the reach of ordinary senses. Examining a variety of cultures, we explore what people say and do as they participate in activities such as magic, healing, pilgrimage, and contemporary religious movements.

**ANTH3163 Male and Female: A Cultural and Biological Overview (Fa)** A comparative study of male and female roles in culture in human biology and social organization.

**ANTH3173 Introduction to Linguistics (Irregular)** Introduces language study with stress upon modern linguistic theory and analysis. Data drawn from various languages revealing linguistic universals as well as phonological, syntactic, and semantic systems of individual languages. Related topics: language history, dialectology, language and its relation to culture and society, the history of linguistic scholarship. Prerequisite: junior standing. (Same as COMM 3173, ENGL 3173, FLAN 3173)

**ANTH3213 Indians of North America (Irregular)** Study of the Indians of North America and the South. This course will review prehistoric and historic events, cultures, and patterns of social change. May be repeated for 9 hours.

**ANTH3263 Indians of Arkansas and the South (Odd Years, Sp)** Study of the traditional lifeways and prehistoric backgrounds of Indians living in the Southern United States, including Arkansas.

**ANTH3333 Anthropology of Ethnicity (Irregular)** Anthropological approaches to the study of race and ethnicity, with reference to other models such as gender, nation, and class. Case studies drawn from Western and non-Western societies, and from pre-colonial and post-colonial periods. (Same as SOCI 3333)

**ANTH3421L Human Osteology Laboratory (Sp)** Laboratory exercises illustrating concepts of human osteology. Corequisite: ANTH 3423.

**ANTH3423 Human Osteology (Sp)** Study of the human skeleton, identification of bones, allometric growth, sexual dimorphism, osteological genetic inheritance and environmental stresses. Lectures and demonstration. Corequisite: ANTH 3421L.

**ANTH3425 Algebra, Human Evolution (Sp)** A study of hominid evolution from the origin to the present, including trends in comparative primate evolution and functional development of human form as a result of cultural and biological interaction.

**ANTH3451 Forensic Science (Irregular)** Introduces to forensics focused on the scientific analysis of physical and biological evidence encountered in criminal investigations. Chemical, microscopic, biological, and observational techniques employed in the analysis of material evidence are described, discussed, and illustrated within an investigative framework. Topics include inorganic remains, fiber, tissue, human identification, fingerprints, tools, and weapons.

**ANTH3473 North American Prehistory (Irregular)** Survey of the aboriginal prehistory of the North American Continent. May be repeated for 12 hours. (Same as ANTH 3473)

**ANTH3503 Power and Popular Protest in Latin America (Irregular)** This course focuses on the historical formation of Latin America by examining conflicts between the region’s nations and its people in an historical perspective on the formation of ethnic, gender, and class relations in Latin America, and a discussion of contemporary social problems.

**ANTH3513 Latinos in the U.S. (Sp)** Why, when, and from where did differently structured groups of Latin Americans cross the border and become involved in U.S. agriculture. Once in the U.S., where did they settle, for whom did they work, and how did they organize (politically as well as culturally)?

**ANTH3523 Gender and Politics in Latin America (Irregular)** This course examines the ways in which political struggles surround land, labor, and the environment have been shaped by gender relations in Latin America. Why and how do peasant-workers engage their political worlds and how are these struggles shaped by gender and gender relations? (Irregular)

**ANTH3580 Physical Anthropology (Irregular)** Survey of the interrelationship of human biology, culture and environment as reflected in disease experience from an evolutionary and cross cultural perspective. Special emphasis on strong arm development.

**ANTH3903 Topics in Anthropology (Sp, Su, Fa)** Covers a special topic or issue. May be repeated for 12 hours.

**ANTH3923H Honors Colloquium (Irregular)** Covers a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in anthropology). May be repeated for 99 hours.

**ANTH3999VH Honors Thesis (Sp, Su, Fa)** (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

**ANTH4013 History of Anthropological Thought (Irregular)** Detailed consideration of anthropological theory through study of its motivation and development. Research paper in this course fulfils the Fulbright College research paper requirement for anthropology majors.

**ANTH4033 Popular Culture (Irregular)** Study of national and international varieties of popular culture, including music, dance, fashion, and the media. Emphasis will be given to both ethnographic approaches, which focus on the investigation of production and consumption of cultural forms and to cultural studies approaches, which see culture as a terrain of struggle.

**ANTH4093 The Archeology of Death (Irregular)** Study of the bioarchaeology of death. Treatment of mortuaries and site remains. Key areas include anthropology of the human skeleton, identification of bones, allometric growth, sex determination, and pattern analysis.

**ANTH4143 Ecological Anthropology (Irregular)** Anthropological perspectives on the study of relationships among human populations and their ecosystems.

**ANTH4153 Culture, History, and Political Economy (Fa)** Course examines various aspects of the relationship between power and meaning, including concepts such as hegemony, resistance, and political consciousness. How do people produce and manipulate culture and history within the context of power relations and social theory? (Irregular)

**ANTH4163 Globalization: Crisis, Conflict and Capitalist Development (Sp)** This course examines the relationship between capitalist development and forms of political and social theory. Theories of capitalist development and scholarly attempts to understand local experiences within the context of broader processes of capitalist change.

**ANTH4173 The Latin American City (Irregular)** This course examines the social, political, and cultural aspects of the modern Latin American city from an interdisciplinary perspective. The course includes an introduction to urban studies, social change, and the political economy of the city. The semester is organized around a specific set of case studies.

**ANTH4183 Global Politics of Food (Irregular)** This course explores the politics of food production, processing, transportation, and consumption on a global level. (Same as PLSC 4523)

**ANTH4243 Archaeology of the Midsouth (Irregular)** Survey of prehistoric and historic cultural complexes of the lower Mississippi Valley and adjacent regions. Prerequisite: junior standing.

**ANTH4253 Peoples and Cultures of World Regions (Irregular)** The anthropology, (prehistory, peoples, and cultures) of a selected world region. Regional emphasis will vary but may include China, Europe, Northeast Asia, India or the Arctic. May be repeated for 12 hours. May be repeated for 12 hours.

**ANTH4256 Archeological Field Session (Su)** Practical field and laboratory experiences in archeological research. May be repeated for 12 hours. May be repeated for 12 hours.

**ANTH4263 Identity and Culture in the U.S.-Mexico Borderlands (Irregular)** An exploration of the interplay between Latino/a, Mexican, Anglo, and Native American identities and cultures along the U.S.-Mexico border. Course examines identity formation, hybridity, social tension, marginalization, race and gender, from an anthropological perspective, paying special attention to the border as a theoretical construct as well as material reality.

**ANTH4335 Laboratory Methods in Anthropology (Irregular)** Theory and practice of describing, analyzing, and reporting upon archeological materials.

**ANTH4336 Museums, Material Culture, and Popular Imaginations (Fa)** Museums as ideological sites and thus as sites of potential contestation produce cultural and moral systems that legitimate existing social orders. This course will focus on strategies of negotiation and the continuous process of negotiating social and cultural hierarchies with and through objects that are displayed.

**ANTH4443 Cultural Resource Management I (SP)** Identifies criteria for the assessment and management of cultural resources relative to cultural resources, including review and interpretation of relevant federal legislation, research vs. planning needs, public involvement and sponsor planning, and assessment of resources relative to scientific criteria, to field training involved; discussion will deal only with administrative, legal and scientific management problems. May be repeated.

**ANTH448V Individual Study in Anthropology (Sp, Su, Fa)** (1-6) Research and independent study with special interests in anthropology. May be repeated for 6 hours.

**ANTH448V Special Problems in Museum Work (Irregular)** (1-6) Individual research, exhibit design and execution, or other problems of museum work.

**ANTH4513 African Religions: Gods, Witches, Ancestors (Irregular)** An exploration of African religions from a variety of anthropological perspectives, exploring how religious experience is perceived and interpreted by adherents, highlighting the way in which individual and group identities are constructed, maintained, and contested within religious contexts. Reading reflects the vast diversity of religious life in Africa.

**ANTH4523 Dental Science (Fa)** Introduction to the role of the dental scientist in forensic anthropology, morpholgy, growth and development, and histology.

**ANTH4533 Middle East Cultures (Sp)** Study of the peoples and cultures of the Middle East; ecology, ethnicity, economics, social organizations, gender, politics, religion, and patterns of social change. May be repeated for 9 hours.

**ANTH4543 Geographic Information Systems (Sp)** Computer assisted analysis and display of geographic resource data. Course develops the theory behind spatial data analysis techniques, and reinforces the theory with exercises that demonstrate its practical applications. Prior experience with computers and/or completion of GEED 4503 (Computer Graphics) is useful but not a prerequisite. (Same as GEOG 4543)

**ANTH4553 Introduction to Raster GIS (Fa)** Theory, data structures, algorithms, and techniques behind raster-based digital information systems. Through laboratory exercises and lectures multidisciplinary applications are examined in database creation, remotely sensed data handling, emission models, and resource models using boolean, relational, algebraic, and other methods. (Same as GEOG 4553). (Same as GEOG 4553)

**ANTH4556 Vector GIS (Sp)** Introduction to geographic information systems (GIS) applications in marketing, trans- portation, real estate, demographic and social planning, and related areas. Lectures focus on development of principles, parallelled by workstation-based laboratory exercises using Arc-node based software and relational data bases. (Same as GEOG 4663)
ANTH453 Introduction to GRASS Applications in GIS (Fa) An introduction to geographic information systems (GIS) using the Geographical Resource Analysis Support System (GRASS) software. (Same as GEOG 4573)

ANTH4583 Peoples and Cultures of Sub-Saharan Africa Explores the people and cultures of Sub-Saharan Africa from a variety of anthropological perspectives. Classic and contemporary works will be studied in order to understand the unity and diversity of African cultures, as well as the importance African societies have played in helping us understand culture/society throughout the world.

ANTH4593 Introduction to Global Positioning Systems (Sp) Introduction to navigation, georeferencing, and digital cartography using GPS receivers, data loggers, and laser technology for natural science and resource management. Components of NavStar Global Positioning system are used in integration of digital information into various GIS platforms with emphasis on practical applications.

ANTH4603 Landscape Archaeology (Fa) This course provides an introduction to the methods and theories of landscape archaeology. Topics include archaeological survey techniques, environmental and social processes recorded in the archaeological landscape, and analysis of ancient settlement and land use data to reveal changes in population, resource utilization, and environmental relationships.

ANTH4752 Archaeological Science and Evolution (Fa) Introduction to the biology of the order of Primates. An exploration of the people and places of our ancestors using comparative systematic relationships of our ancestors using comparative morphological, primate evolution, and phylogeny, and details relevant aspects of the anatomy and paleoanthropological data. Prerequisite: ANTH 1013 and BIOL 1543 or BIOL 1541L. (Same as BIOL 4613)

ANTH4631L Archeological Prospecting & Remote Sensing (Odd years, Fa) Ground-based geophysical, aerial, and other remote sensing methods are examined for detecting, mapping, and understanding archeological and other deposits. These methods include magnetometry, resistivity, conductivity, radar, aerial photography, thermography, and multispectral scanning. Requires computer skills, field trips, and use of instruments. Corequisite: ANTH 4633. Prerequisite: ANTH 4543 or GEOG 4543 or ANTH 4553 or GEOG 4553 or GEOG 4573 or GEOG 4573 and BIOL 1543. (Same as BIOL 3023)

ANTH4633 Archeological Prospecting & Remote Sensing (Even years, Fa) Ground-based geophysical, aerial, and other remote sensing methods are examined for detecting, mapping, and understanding archeological and other deposits. These methods include magnetometry, resistivity, conductivity, radar, aerial photography, thermography, and multispectral scanning. Requires computer skills, field trips, and use of instruments. Corequisite: ANTH 4631L. (Same as GEOS 4633)

ANTH4653 Advanced Raster GIS (Irregular) Advanced raster topics are examined beginning with a theoretical and methodological review of Tomlin's cartographic modeling principles. Topics vary and include Fourier methods, image processing, kriging, spatial statistics, principal components, fuzzy and regression modeling, and multi-criteria decision analysis. GIS programs are examined with links to statistical analysis software. Prerequisite: ANTH 4633 or GEOG 4543 or GEOG 4553.

ANTH4803 Historical Archaeology (Irregular) Review of the development of historical archaeology and discussion of contemporary theory, methods, and substantive issues. Lab sessions on historic artifact identification and analysis.

ANTH4813 Ethnographic Approaches to the Past (Irregular) Review of the uses of ethnographic data in the reconstruction and interpretation of past cultures and cultural processes with particular emphasis on the relationships between modern theories of culture and archeological interpretation.

ANTH4836 Quantitative Anthropology (Irregular) Introductory statistics course for anthropology students. Examines the nature, properties, and limitations of the use of quantitative data. The course covers descriptive statistics, probability distributions, test for means and variances, categorical and rank methods, ANOVA. Emphasis is on the interpretation of results, the correct use of statistics and the experimental design of social science research. Prerequisite: BIOL 1543, BIOL 1541L, or BIOL 3023.

ANTH4903 Seminar in Anthropology (Irregular) Research on anthropological topics focusing on a variety of topics. May be repeated for 12 hours. May be repeated for 12 hours.

ANTH4913 Topics of the Middle East (Sp, Su, Fa) Covers a special topic or issue. May be repeated for 9 hours.

ANTH4923 Karl Marx: Life, Work, and Legacy (Irregular) This course examines the writings of Karl Marx. Students will read Marx's major works, including: Capital, The German Ideology, and Grundrisse. In order to understand Marx's writing, students will also explore his life, times, and legacy.

ANTH500V Research Methods in Anthropology (Sp, Su, Fa) Individual research at graduate level on clearly defined problems or area problems. May be repeated for 18 hours.

ANTH5023 Public Archeology (Sp) Practical problems of archaeology in relation to federal and state needs, legislative requirements, contract research, public support and information need, and the job market.

ANTH5033 Settlements, Sites, and Models (Irregular) The modeling of potential archaeological resource locations within regions receives significant resources and funding from government and private sectors. The theoretical and methodological basis behind such models is examined, as are the history, controversies, key issues, individuals, and institutions in the development and use of research models; organization of observational and other methods of analyzing and interpreting data.

ANTH5053 Quantumary Environments (Fa) An interdisciplinary approach to the period including dating methods, deposits, soils, climates, tectonics, and human adaptation. Lecture 2 hours, laboratory 2 hours per week. (Same as GEOG 5053, GEOG 5053)

ANTH5103 Applications of Cultural Method and Theory (Fa) Review of the nature and history of cultural anthropology; recent theories and practical implications and applications of various methods of acquiring, analyzing, and interpreting cultural anthropological data.

ANTH5153 Topics in Anthropology (Sp, Su, Fa) Graduate level seminar with varied emphasis on topics relating to cultural anthropology. May be repeated for 99 hours.

ANTH5203 Application of Method and Theory (Fa) An interdisciplinary course on various methods of acquiring, analyzing, and interpreting data about cultural anthropological data.

ANTH525V Topics in Archeology (Sp, Su, Fa) (1-18) Graduate level seminar with varied emphasis on topics relating to archeology. May be repeated for 99 hours.

ANTH5263 Indians of Arkansas and the South (Odd Years, Sp) Study of the traditional lifeways and prehistoric backgrounds of Indians living in the southern United States, including Arkansas.

ANTH5303 Applications of Method and Theory in Biological Anthropology (Irregular) Review of the nature and history of biological anthropology; recent theories and the practical implications and applications of various methods of acquiring, analyzing, and interpreting biological anthropological data.

ANTH5333 Social Organization (Fa) Comparative study of social organization focusing primarily on pre-industrial and non-western cultures. Primary topics are variation in kinship, kinship groups, kinship terminology analysis, marriage, and current developments in social structure.

ANTH535V Topics in Physical Anthropology (Sp, Fa) (1-6) Graduate level seminar with varied emphasis on topics relating to physical anthropology. May be repeated for 99 hours.

ANTH5413 Bioarchaeology Seminar (Even years, Sp) Intensive study of bioarchaeological method and theory with the operation of the context of both academic and cultural resource management research.

ANTH5423 Human Evolutionary Anatomy (Irregular) Palaeoanatomists reconstruct past lifeways and systematic relationships of our ancestors using comparative studies of body morphology and associated soft tissues. This course surveys methods and theories used to infer function and phylogeny, and the implications of changes in the anatomy of humans, living great apes, and fossil human ancestors. Prerequisite: ANTH 1013 and BIOL 1543. (Same as BIOL 5423)

ANTH5443 Cultural Resource Management I (Irregular) Concentrated discussion of management problems relative to cultural resources, including review and interpretation of relevant federal legislation, research vs. planning needs, public involvement and sponsor planning, and assessment of resources relative to scientific needs. No field training involved; discussion will deal only with administrative, legal, and scientific management problems.

ANTH545V Special Problems in Museum Work (Irregular) (1-6) Individual research, exhibit design and execution, or other problems of museum work. May be repeated for 6 hours.

ANTH551V Field Research in Archeology (Irregular) (1-6) Directed graduate level archeological fieldwork. May be repeated for 6 hours.

ANTH5633 Advanced Archaeological Prospecting (Irregular) This course offers advanced training in applications of archaeological geophysics. Emphasis is placed on theory, instrument handling, uses of advanced software, and the interpretation of data from five principal methods: magnetometry, electrical resistivity, electromagnetic induction, ground-penetrating radar, and thermal infrared imaging. Prerequisite: ANTH 4633.

ANTH600V Master's Thesis (Sp, Su, Fa) (1-6)

ANTH6033 Society and Environment (SP) This course examines the complex interrelationships between human societies and the natural environment. Drawing on diverse and interdisciplinary perspectives in archaeology, ethnography, history, geography, and paleo-environmental studies, readings and discussion will explore the co-production of social and environmental systems over time. (Same as ENVS 6033) May be repeated.

ANTH610V Internship (Sp, Su, Fa) (1-18) May be repeated for 18 hours.

ANTH681V Seminar: Cultural Anth (Sp, Fa) (1-6) Variable topics in Cultural Anthropology will be explored in depth. May be repeated for 6 hours.

ANTH682V Seminar: Archeology (Sp, Fa) (1-6) Variable topics in Archaeology will be explored in depth.

ANTH683V Seminar: Biological Anth (Sp, Fa) (1-6) Variable topics in Biological Anthropology will be explored in depth.

ANTH700V Doctoral Dissertation (Sp, Fa) (1-9)
Course Descriptions

Architecture (ARCH)

ARCH1003H Honors Basic Course in the Arts: Architecture Lecture (Sp)
Introduction to architecture, emphasizing the origins and development of architecture and objective criteria for its evaluation. For the general student. May not be presented towards satisfaction of major requirements in either the B.Arch. or B.A. in architectural studies degrees. Corequisite: drill component. (Same as ARCH 1003H)

ARCH1014 Architectural Design I (Sp, Fa)
Architecture Lecture (Sp, Fa)
Introduction to architecture, emphasizing the origins and development of architecture and objective criteria for its evaluation. For the general student. May not be presented towards satisfaction of major requirements in either the B.Arch. or B.A. in architectural studies degrees. (Same as ARCH 1003H)

ARCH1121 Design Methods I (Sp, Fa)
Interdisciplinary introduction to basic principles of design, from observation, building and the natural landscape, urbanism and the public realm. Lecture 1 hour per week. Corequisite: ARCH 1014.

ARCH1122 Design Methods II (Sp, Su)
Theoretical, formal, and constructive principles and their impact in the design disciplines, modernism and after. Introduction to the intellectual and foundational philosophies of design theory. Lecture 1 hour per week. Corequisite: ARCH 1024.

ARCH2016 Architectural Design III (Fa)
Introduction of formal principles and strategies used in space making, focusing on the development of plans and sections. Precedents and the understanding of them through analysis and synthesis are used as a means of examining the past and the present while providing a framework from which personal design sensibilities can evolve. Corequisite: ARCH 2114 and ARCH 2223. Prerequisite: ARCH 1025.

ARCH2026 Architectural Design IV (Sp)
An elaboration of space-making, addressing three-dimensional aspects of form-making, including the influence of structural system, architectural section, and expression; the role of site as a generator of form; and the overarching importance of techniques, including the materiality of space, structure, and light. Corequisite: ARCH 2124.

ARCH2114H Honors Architecture Technology I (Fa)
Introduction to the fundamentals of building systems technology. Emphasis on the interrelationships of site, environmental, structure, and enclosure systems. Focus on the integration of all systems within the conceptual and functional organization of the building and its context. Corequisite: ARCH 2016. Prerequisite: ARCH 1025 and ARCH 1221.

ARCH2114 Architecture Technology I (Fa)
Introduction to the fundamentals of building systems technology. Emphasis on the interrelationships of site, environmental, structure, and enclosure systems. Focus on the integration of all systems within the conceptual and functional organization of the building and its context. Corequisite: ARCH 2016. Prerequisite: ARCH 1025 and ARCH 1221.

ARCH2124H Honors Architecture Technology II (Sp)
Study of force systems, section properties, equilibrium and stability of building structures. Technical properties and structural member behavior to the forces acting on the building structural system. Specific topics are: stress/strain relationships of various materials; types of stress; shear and moment diagrams; design and analysis of simple wood and steel framing systems; introduction to indeterminate structures; and use of structural analysis computer programs. Three hours of lecture and one hour of laboratory exercises in principles and practices of architectural technology each week. Corequisite: ARCH 2026. Prerequisite: ARCH 2114 and PHYS 1044. (Same as ARCH 2124)

ARCH2124 Architecture Technology II (Sp)
Study of force systems, section properties, equilibrium and stability of building structures. Technical properties and structural member behavior to the forces acting on the building structural system. Specific topics are: stress/strain relationships of various materials; types of stress; shear and moment diagrams; design and analysis of simple wood and steel framing systems; introduction to indeterminate structures; and use of structural analysis computer programs. Three hours of lecture and one hour of laboratory exercises in principles and practices of architectural technology each week. Corequisite: ARCH 2026. Prerequisite: ARCH 2114 and PHYS 1044. (Same as ARCH 2124)

ARCH2233 History of Architecture I (Fr)
Critical study and analysis of architecture from ancient times through the middle ages, including pre-classical, classical, Early Christian, Byzantine, Proto-Romanesque, Romanesque, and Gothic periods. Corequisite: ARCH 2026. Prerequisite: ARCH 2114, PHYS 1044, and PHYS 1040L.

ARCH2233H Honors History of Architecture I (Fa)
Critical study and analysis of architecture from ancient times through the middle ages, including pre-classical, classical, Early Christian, Byzantine, Proto-Romanesque, Romanesque, and Gothic periods. Corequisite: ARCH 2026. Prerequisite: ARCH 2114, PHYS 1044, and PHYS 1040L.

ARCH2236 Architectural Design VI (Sp)
Continuation of Architectural Design V. Corequisite: ARCH 2224. Prerequisite: ARCH 2224.

ARCH2236 Architectural Design VI (Sp)
Continuation of Architectural Design V. Corequisite: ARCH 2224. Prerequisite: ARCH 2224.

ARCH3026 Architectural Design VII (Sp)
Continuation of Architectural Design VI. Corequisite: ARCH 3016. Prerequisite: ARCH 3016.

ARCH303VH Honors Special Projects (Irregular)
(1-6)
Individual or group investigation in research, visual communication, history, or design concerning special interests of student or faculty. (Same as ARCH 303V) May be repeated for 99 hours.

ARCH303V Special Projects (Irregular)
(1-3)
Individual or group investigation in research, visual communication, history, or design concerning special interests of student or faculty. (Same as ARCH 303V) May be repeated for 99 hours.

ARCH3133 Architectural Presentation (Irregular)
A study of basic techniques in architectural presentation drawing and rendering, including studio problems designed to develop the use of black and white and color media. Studio 6 hours per week.

ARCH3134H Honors Architecture Technology III (Fa)
In-depth discussions concerning the nature, behavior and appropriate uses of materials for building construction. In-depth study of high-rise, specialty and contemporary structural systems. Introduction to detail drawing and construction drawings. Three hours lecture and one hour of laboratory exercises in principles and practices of architectural technology each week. Corequisite: ARCH 3016. Prerequisite: ARCH 2124. (Same as ARCH 3134H)

ARCH3144H Honors Architecture Technology IV (Sp)
Emphasis on structural, mechanical, plumbing, electrical, fire protection, and architectural systems and environmental considerations of energy usage, codes requirements, system selection and integration. Three hours lecture and one hour laboratory exercises in principles and practices of architectural technology each week. Corequisite: ARCH 3026. Prerequisite: ARCH 3124. (Same as ARCH 3144H)

ARCH4433H Honors History of Architecture III (Fa)
Critical study and analysis of the history and theories of modern architecture from the mid-nineteenth century to the present. Prerequisite: ARCH 2223 and ARCH 2243 (or HESC 2883 and HESC 3883). (Same as ARCH 4433)

ARCH4473 Eastern Art and Architecture (Irregular)
A study of the development of Indian, Chinese, and Central Asian art and architecture. Three hours lecture and 3 hours discussion. Corequisite: ARCH 4473.

ARCH4483H Honors Architecture of the Americas (Irregular)
A study of the development of architecture in the Americas from the pre-Columbian cultures to the present day. Lecture and discussion. Corequisite: ARCH 4433.
ARCH4483 Architecture of the Americas (Irregular) Study of the development of architecture in the Americas from the Pre-Columbian cultures to the present day. Lecture and studio 3 hours per week.

ARCH4610 Architecture Cooperative Education I (Irregular) A practicum which introduces and engages the student in the practice and application of the profession. Prerequisite: second year program requirements. 2.5 minimum GPA and permission of the faculty.

ARCH4913 Design Thinking: Relationships Between Theory and Process (Irregular) Studies of the relationship between design theory and process using examples from history with emphasis on contemporary development and roots. Prerequisite: ARCH 4433.

ARCH5016 Architectural Design IX (Su, Fa) Comprehensive review and reevaluation of all complex program covering issues at both urban and architectural scales. Students synthesize the knowledge and critical thinking acquired during the previous coursework and synthesize their knowledge and critical thinking to integrate building technology. Prerequisite: ARCH 5016.

ARCH5162 Architecture Technology VI (Fa) Synthesis of building technologies, systems selection, systems design, and construction methods appropriate for preconstruction project studio (ARCH 5016). Required readings in emerging technologies of building construction. Corequisite: ARCH 5016 or ARCH 5026. Prerequisite: ARCH 4154.

ARCH5253 Architectural Structures Seminar (Irregular) Advanced discussion, investigation, design, and analysis of structural systems, forms, and materials as determinants of architectural design. May be repeated for 6 hours.

ARCH5314 Architectural Professional Practice (Fa) Study of role and responsibility of the architect, owner, and contractor relationships; professional ethics; organization of the architectural practice; legal and legal constraints on design; and use controls, building codes, and copyright law. Ethical and economic issues are also considered.

ARCH5493 History of Urban Form (Irregular) Study of the physical form of cities from ancient Greece to contemporary America with emphasis on urban form as an expression of physical and cultural determinants. Included are investigations into the history, theory, and practice of urban design. Prerequisite: ARCH 2023 and ARCH 2423 and ARCH 4433.

ARCH5464 Architectural Computer Applications (Irregular) Digital computer programming and introduction to the use of computers as design and realization tools.

ARCH5933 Preservation and Restoration (Irregular) History of the preservation and restoration movement in Europe and the U.S., its relation to the contemporary urban planning and renewal. Modern economic and administrative techniques of preservation. Participation in history surveys at regional and state levels.

Art History (ARHS)

ARHS1003H Honors Basic Course in the Arts: Art Lecture (Irregular) A general introduction to the visual arts. Lectures on theory and criticism, demonstrations films, slides. Three hours a week plus attendance at specified programs and exhibits. May not be presented toward satisfaction of the B.A. fine arts requirement by art majors. (Same as ARTS 1013H)

ARHS1003 Basic Course in the Arts: Art Lecture (Sp, Su, Fa) A general introduction to the visual arts. Lectures on theory and criticism, demonstrations films, slides. Three hours a week plus attendance at specified programs and exhibits. May not be presented toward satisfaction of the B.A. fine arts requirement by art majors. (Same as ARTS 1013)

ARHS2913 Art History Survey I (Fa) Survey of art works from Stone Age through Medieval.

ARHS2923 Art History Survey II (Sp) Survey of art works from Renaissance through the 19th century.

ARHS4813 The History of Photography (Irregular) Survey of photography from 1685 to present.

ARHS4823 History of Graphic Design (Irregular) Survey of graphic design history from 1850 to the present. Prerequisite: ARHS 4823.

ARHS4833 Ancient Art (Even years, Sp) Study of the visual arts of Mesopotamia, Egypt, Greece, and the Roman Empire. Prerequisite: ARHS 4833.

ARHS4843H Honors Medieval Art (Irregular) Study of Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic styles. Prerequisite: ARHS 2913. (Same as ARCH 4843H)

ARHS4843 Medieval Art (Irregular) Study of Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic styles. Prerequisite: ARHS 2913. (Same as ARCH 4843H)

ARHS4853H Honors Italian Renaissance Art (Irregular) Study of Proto-Renaissance, Early, High Renaissance, and Mannerist styles in Italy. Prerequisite: ARHS 2923.

ARHS4853 Italian Renaissance Art (Irregular) Study of Proto-Renaissance, Early, High Renaissance, and Mannerist styles in Italy. Prerequisite: ARHS 2923.

ARHS4863H Northern Renaissance Art (Irregular) Study of Late Gothic and Renaissance styles in the Netherlands, Germany, and France. Prerequisite: ARHS 2923. (Same as ARHS 4863H).

ARHS4863 Northern Renaissance Art (Irregular) Study of Late Gothic and Renaissance styles in the Netherlands, Germany, and France. Prerequisite: ARHS 2923. (Same as ARHS 4863H).

ARHS4873H Honors Baroque Art (Irregular) Study of art styles of the 17th and 18th centuries, primarily in Italy, Spain, France, Flanders, and the Netherlands. Prerequisite: ARHS 2923. (Same as ARHS 4873H).

ARHS4873 Baroque Art (Irregular) Study of art styles of the 17th and 18th centuries, primarily in Italy, Spain, France, Flanders, and the Netherlands. Prerequisite: ARHS 2923. (Same as ARHS 4873H).

ARHS4883H Honors 19th Century European Art (Irregular) Study of Neo-Classicist, Romanticist, Realist, Impressionist, and Post-Impressionist styles. Prerequisite: ARHS 2923. (Same as ARHS 4883H)

ARHS4883H 19th Century European Art (Irregular) Study of Neo-Classicist, Romanticist, Realist, Impressionist, and Post-Impressionist styles. Prerequisite: ARHS 2923. (Same as ARHS 4883H).

ARHS4893H 20th Century European Art (Odd Years, Fa) Study of the major styles and movements of the century, including Cubism, Fauvism, German Expressionism, and Surrealism. Prerequisite: ARHS 2923.

ARHS4893 20th Century European Art (Odd Years, Sp) Study of the major styles and movements of the century, including Cubism, Fauvism, German Expressionism, and Surrealism. Prerequisite: ARHS 2923.

ARHS4913H Honors American Art to 1900 (Odd Years, Fa) The visual arts in the United States from their beginning in Colonial times through the nineteenth century. Prerequisite: ARHS 2923. (Same as ARHS 4913H)

ARHS4913 American Art to 1900 (Odd Years, Fa) The visual arts in the United States from their beginning in Colonial times through the nineteenth century. Prerequisite: ARHS 2923. (Same as ARHS 4913H)

ARHS4923H HONORS AMERICAN ART SINCE 1900 (Even Years, Sp) The visual arts in the United States from the turn of the century to the contemporary era. Prerequisite: ARHS 2923 and ARHS 48923.

ARHS4923 American Art Since 1900 (Even Years, Sp) The visual arts in the United States from the turn of the century to the contemporary era. Prerequisite: ARHS 2923. (Same as ARHS 4923H)

ARHS4933 Seminar in Contemporary Art (Irregular) Study of styles and major trends in the visual arts since 1945. Prerequisite: ARHS 2923 and ARHS 48923.

ARHS4943H Honors Seminar in Art Criticism (Fa) Study and problems in the criticism of art forms and styles. (Same as ARHS 4943H)

ARHS4943 Seminar in Art Criticism (Fa) Study and problems in the criticism of art forms and styles. (Same as ARHS 4943H)

ARHS4953H Honors Individual Research in Art History (Sp, Fa) Independent study in specific areas of art history and criticism. Prerequisite: 12 hours of art history. (Same as ARHS 4953H)

ARHS4963 Individual Research in Art History (Sp, Fa) Independent study in specific areas of art history and criticism. Prerequisite: 12 hours of art history. (Same as ARHS 4963H)

ARHS4973 Seminar in Art History (Irregular) Special studies of periods and styles of art. Prerequisite: 6 hours of art history.

ARHS4983 Special Topics in Art History (Irregular) Subject matter not covered in regularly offered courses and relating to the history of the arts since the nineteenth century. May be repeated (for different topics) for up to 6 hours. Prerequisite: ARHS 2913 or ARHS 2923. May be repeated for 6 hours.

ARHS4993 Special Topics in Modern Art (Irregular) Subject matter not covered in regularly offered courses, and relating to the history of art from the nineteenth century to the present. May be repeated (for different topics) for up to 9 hours. Prerequisite: ARHS 2913 or ARHS 2923.

ARHS5933 Graduate Research in Art History (Irregular) Independent study in specific areas of art history and criticism.

ARSC6943 Seminar: Critical Thought in Art (Fa) Explore topics of concern to the studio artist involving underlying concepts and purposes of art as well as models and methods for the analysis of art. Course based on discussions of selected readings, prepared papers and seminar reports. Prerequisite: graduate standing. May be repeated for 3 hours.

Arts and Sciences (ARSC)

ARSC1001 First Year Experience (Fa) Open to incoming freshman and transfer students participating in the university’s First Year Experience. Available for credit only.

ARSC300V Study Abroad (Sp, Su, Fa) (1-15) Open to undergraduate students studying abroad in officially sanctioned programs. May be repeated for 24 hours.

ARSC310V Cooperative Education (Sp, Su, Fa) (1-4) Required of participants in cooperative education work assignments. Available for credit only. May be repeated for 36 hours.

ARSC500V Study Abroad (Sp, Su, Fa) (1-6) Open to undergraduate students studying abroad in officially sanctioned programs. May be repeated for 24 hours.

ARTS1003 Basic Course in the Arts: Art Studio (Sp, Su, Fa) Provides experience through participation in the studio arts. (Same as ARTS 1003H)

ARTS1013 Drawing Fundamentals I (Sp, Fa)
is an introductory course in ceramic sculpture focusing on basic handbuilding techniques and basic ceramic processes including clay mixing, glaze mixing, and low temperature gas and electric firing techniques. Prerequisite: ARTS 1013 and ARTS 1313 and ARTS 1323.

ARTS3523 Ceramics: Wheelthrowing I (Sp, Fa) This is an introductory course in ceramics focusing on basic fundamental wheelthrowing techniques and basic ceramic processes including clay mixing, glaze mixing, and low-temperature gas and electric firing techniques. Prerequisite: ARTS 1013 and ARTS 1313.

ARTS3533 Ceramics: Wheelthrowing II (Sp, Fa) This course is an intermediate course in wheelthrowing and some handbuilding. A primary emphasis is on clay body and glaze calculation and understanding the processes of firing low, high, and atmospheric kilns. Prerequisite: ARTS 3503 and ARTS 3532.

ARTS3543 Ceramics: Slip-Casting (Sp) This is an intermediate course in ceramic sculpture focusing on concept-based object making. The techniques taught are mold-making and slip-casting, along with an advanced understanding of clay mixing, glaze mixing, low and high temperature gas, salt/soda, and electric firing techniques. Prerequisite: ARTS 3503 and ARTS 3523.

ARTS3803 Photography I (Sp, Fa) Beginning photography. Introduction to B & W materials, techniques, and theory. Development techniques, printing, oxidation techniques, and theory. Introduction to "non-traditional" materials, techniques, and theory (Cyanotype, Van Dyck Brownprint, Gum Biochrome, KWIK-PRINT, etc.). Assignments, critiques, slide lectures, and demonstrations. Prerequisite: ARTS 1313.

ARTS3813 Alternative Photographic Processes (Sp, Su, Fa) An exploration of alternative photographic processes and theory. Prerequisite: ARTS 3023 and ARTS 3040.

ARTS4023 Figure Drawing II (Irregular) Advanced study of the figure with emphasis on figure structure and its relationship to pictorial form in drawing. Prerequisite: ARTS 2013.

ARTS4033 Drawing IV (Sp, Fa) Continued advanced studies and problems in drawing techniques and varied subjects. Prerequisite: ARTS 3023.

ARTS4040V Special Problems in Drawing (Sp, Su, Fa) (1-6) Individual projects in drawing arranged with the instructor. Prerequisite: ARTS 3023. May be repeated for 6 hours.

ARTS4143 Painting III (Sp, Fa) Concentration of the coordination of the technical, aesthetic, and creative aspects of painting. Prerequisite: ARTS 3113.

ARTS4163 Painting IV (Sp, Fa) Continued advanced concentration of the technical, aesthetic, and creative aspects of painting. Prerequisite: ARTS 4143. May be repeated for 6 hours.

ARTS4213 Sculpture III (Sp, Fa) Continued study of the techniques and materials of sculpture. Prerequisite: ARTS 3213. May be repeated for 6 hours.

ARTS4223 Sculpture IV (Sp, Fa) Continued work in sculpture techniques with emphasis on casting. Prerequisite: ARTS 3213. May be repeated for 6 hours.

ARTS4243V Special Problems in Sculpture (Sp, Fa) (1-6) Individual projects in sculpture with emphasis on materials exploration. Prerequisite: ARTS 4223. May be repeated for 6 hours.

ARTS4343 Advanced Design (Sp) Studio problems in the interrelationships of two and three-dimensional elements in traditional, experimental, and digital media. Prerequisite: ARTS 1313 and ARTS 1323 and ARTS 2133.

ARTS435V Special Problems in Design (Sp, Fa) (1-6) Extended problems in an area of interest in pure or applied design. Prerequisite: ARTS 4143 or ARTS 4153. May be repeated for 6 hours.

ARTS458V Special Problems in Ceramics (Sp, Fa) (1-3) Individual projects in ceramic techniques. Prerequisites: ARTS 3003 or ARTS 3523. May be repeated for 6 hours.

ARTS459V Individual Instruction (Sp, Fa) (1-6) Special projects on an arranged basis for advanced students in any area of art in which the catalog sequence of courses has been completed. May be repeated for 6 hours.

ARTS4613 Visual Design: Web I (Fa) This course introduces students to the World Wide Web and the technology and practices involved in creating a successful Web presence. Discussions include interactivity, usability and accessibility with an emphasis on handcoding standards-based XHTML and cascading style sheets and a special attention to graphic design standards. Prerequisite: ARTS 3363.

ARTS4623 Visual Design: Web II (Sp) This course will study advanced techniques in creating successful Web pages with information architecture and cascading style sheets, Web animation, digital photography, sequential storytelling and actual client work. Experimentation in concept, style and format are encouraged as students scrutinize the未知 what has been arranged. Advanced methods for the World Wide Web. Prerequisite: ARTS 4613.

ARTS4653 Elements of Animation (Sp) This course explores the fundamentals of sequential imagery and storyboarding from traditional methods through modern animation software. computer based projects will make use of digital and video cameras, video editing software, Web animation software and a 3D animation package. Prerequisites: ARTS 1013, and ARTS 1313 and ARTS 3363.

ARTS469V Special Problems in Interactive Design (Sp, Fa) (1-6) Students work on special projects on an individual basis with instructor, exploring innovative interface design, in-depth projects potentially exploring solutions to and awareness of social issues, with various types of media, from DVD and digital video to Web and motion graphics. Cross-discipline collaboration is encouraged. May be repeated for a total of 6 hours. Prerequisites: ARTS 4613 and ARTS 4623 and ARTS 4653. May be repeated for 6 hours.

ARTS4813 Digital Photography (Fa, Even years) Introduction to digital photography production, techniques and theory. Digital Input from scanning (film & black & white-negative), digital cameras, video and Internet sources. Computer assisted manipulation of imagery for correction and abstraction. Output to a digital printer and advanced color management (film recorder, servers and Internet). Prerequisite: ARTS 3363.

ARTS4823 Color Photography I (Irregular) Introduction to color production. Color materials, techniques and theory. Direct reversal transparencies and prints, color negative reversal techniques, color negative and digital color materials. Assignments, demonstrations, critiques, and lectures. Prerequisite: ARTS 3803.

ARTS4833 Advanced Photography (Fa) Individual
problems in photography with optional study in areas of color, slide production, and photography application to other art media. Prerequisite: ARTS 484V Special Problems in Photography (Sp, Fa) (1-6) Individual instruction for advanced undergraduates and graduate students. Special projects in photography designed in collaboration with the faculty. Prerequisite: ARTS 3803 and (ARTS 3813 or ARTS 4823 or ARTS 4833). May be repeated for 6 hours.

ARTS490V Honors Thesis (Sp, Fa) (1-6) Special problems in studio, art history, art criticism, art education, or a combination of these. Prerequisite: junior standing. May be repeated for 12 hours.

ARTS491V Internships in Art (Sp, Su, Fa) (1-3) Credit for practicing within workshops in studio art, art history, gallery practices and/or art education. Report required from intern and field supervisor on significant accomplishments and/or progress. Prerequisite: junior standing and major. May be repeated for 6 hours.

ARTS4921 Workshop: Professional Practices in Art (Sp) A workshop in professional artistic practices including portfolio presentation, matting, framing, writing resumes, making slides of work, health and safety issues, opportunities, etc. Prerequisite: Art majors only. Requires junior, senior or graduate standing.

ARTS493V Fine Arts Gallery Internship (Sp, Su, Fa) (1-3) Studying and operating the Fine Arts Gallery. Research and preparation for exhibitions, organize and install exhibits, care of art works, create and distribute publicity, arrange interviews with newspapers, and other media.

ARTS494V Graphic Design Internship (Sp, Su, Fa) (1-6) Credit for practical experience gained through internship in graphic design. Report required form intern and field supervisor on progress and significant accomplishments. 3 credit hours per semester. Prerequisite: Any 4000 level ARTS visual design course except ARTS 4343. May be repeated for 6 hours.

ARTS5923 Special Topics (Irregular) (1-6) May be offered in a subject not specifically covered by the courses otherwise listed. May be repeated for 6 hours.

ARTS498V Senior Thesis (Sp, Fa) (1-6) ARTS5901 Special Topics (Irregular) (1-6) Graduate level study of drawing materials and techniques. Prerequisite: graduate standing.

ARTS5901 Graduate Critique (Sp, Fa) Art faculty and critique of M.F.A. student's art works. Prerequisite: admission into the M.F.A. program.

ARTS5912 Graduate Seminar in Studio Art (Sp, Fa) Examination and analysis of current issues in contemporary visual art. The relationship of current theoretical literature to studio practice will be explored through presentations and discussions of graduate student research. Prerequisite: admission to M.F.A.

ARTS601V Master of Fine Arts Exhibition (Sp, Su, Fa) (1-6) Production and presentation of a one person exhibition of art work. The M.F.A. candidate will be responsible for making three acceptable slide sets of the exhibition and exhibition statements. Prerequisite: M.F.A. candidate.

ARTS602V Graduate Drawing (Sp, Su, Fa) (1-6) Individual problems in drawing techniques. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS612V Graduate Painting (Sp, Su, Fa) (1-6) Individual problems in painting techniques. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS621V Graduate Sculpture (Sp, Su, Fa) (1-6) Individual problems in sculpture techniques. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS632V Graduate Design (Sp, Su, Fa) (1-6) Individual problems in two and three dimensional design. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS642V Graduate Printmaking (Sp, Su, Fa) (1-6) Individual problems in printmaking techniques. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS652V Graduate Ceramics (Sp, Su, Fa) (1-6) Individual problems in ceramics. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS682V Graduate Photography (Sp, Su, Fa) (1-6) Individual problems in photography. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS692V Special Studio Problems (Sp, Su, Fa) (1-6) Individual problems in studio areas on arranged basis. Prerequisite: graduate standing. May be repeated for 99 hours.

ARTS695V Special Topics (Irregular) (1-6) Subject matter not covered in other courses. Prerequisite: graduate standing. May be repeated for 12 hours.

Astronomy (ASTR)

ASTR2001M Survey of the Universe and Laboratory, Honors (Sp, Su, Fa) An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system, the sun, normal stars and interstellar medium, birth and death of stars, neutron stars, and black holes.

ASTR2001L Survey of the Universe Laboratory (Sp, Su, Fa) Daytime and nighttime observing with telescopes and indoor exercises on selected topics. (Same as ASTR 2001M)

ASTR2003H Honors Survey of the Universe and Laboratory (Sp, Su, Fa) An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system, the Sun, normal stars and interstellar medium, birth and death of stars, neutron stars, pulsars, black holes, the Galaxy, clusters of galaxies, and cosmology. Prerequisite: admission into the M.F.A. program. May be repeated for 3 hours.

ASTR2003 Survey of the Universe (Sp, Su, Fa) An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system, the Sun, normal stars and interstellar medium, birth and death of stars, neutron stars, pulsars, black holes, the Galaxy, clusters of galaxies, and cosmology.

ASTR301V Observational Astronomy (Sp, Su, Fa) (1-3) Individual experimental or observational problems studied with small telescopes, cameras, and other basic equipment. No credit is given toward a B.S. degree in physics. Prerequisite: ASTR 2003 or ASTR 3003.

ASTR3033 Solar System Astronomy (Irregular) Basic course on state of knowledge of solar system astronomy, especially designed for students in B.A. Physics program or as an elective for undergraduates in related areas. Prerequisite: PHYS 2033 and PHYS 2033L.

ASTR3053 Stellar System Astronomy (Irregular) Basic course on stars, galaxies and cosmology, especially designed for students in the B.A. Physics program or as an elective for undergraduates in related areas. Prerequisite: PHYS 2033 and PHYS 2031L.

ASTR5013 Astrophysics (Odd years, Fa) Introduction to astrophysics. The course covers stellar evolution, interstellar medium, galactic nucleogenesis and observational cosmology. Prerequisite: PHYS 3614, CHEM 3504, or graduate standing.

ASTR5033 Planetary Systems (Fa) The nature of the solar system and other planetary systems as deduced from observations and theoretical modeling. Structure and evolution of terrestrial and jovian planets and their satellites. Planetary atmospheres and the solar wind; planetary interiors. Theoretical and observed properties of exoplanetary systems; astrobiology.

Biological Engineering (BENG)

BENG1012 Biological Engineering Design Fundamentals (Irregular) Introduction to the profession of Biological Engineering including a definition, and demonstration through field trips, guest speakers, examples of job opportunities and internships. Basic engineering methodologies, including analysis applied to biological systems. Introduction to problem solving, data analysis, report writing, presentations, and engineering record keeping. Group activities and team design efforts. Lecture 1 hour, laboratory 3 hours per week. Corequisite: Lab component.

BENG1022 Biological Engineering Design Studio I (Irregular) Practical of biological engineering design in the Biological Engineering Design Studio. Design projects explore the unique problems associated with biological engineering applied to biological systems. Group activities to teach team work skills in the context of engineering practice, including reporting, project management, time management, communication and balancing individual and team accountability. Introduction and application to a computer aided graphics package. Lecture 1 hour, laboratory 3 hours per week. Prerequisite: BENG 1012 or GNEG 1103. Corequisite: Lab component.

BENG2103 Electronic Applications in Biological Systems (Irregular) Basic circuit theory and introductory applications of DC circuits, AC circuits and electro-mechanical components in actuating, monitoring and controlling processes involving biological materials. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component.

BENG2612 Biological Engineering Design Studio II (Fa) Applications of biology, chemistry and physics to the design of life support for engineering involving people, animals, plants and microbes. Design process will be based upon engineering analyses such as quantifying bio-energetics and growth, energy and mass balances, solar energy and psychrometrics. Student teams will be presented multiple design modules that include literature/experimental discovery, open-ended design and prototype testing. 4 hours of design studio per week. Corequisite: PHYS 2054, BIOL 1543/1544L and BENG 1012 or GNEG 1103 or equivalent.

BENG2622 Biological Engineering Design Studio III (Sp) Continuation of BENG 2612. Design studio experience includes additional life support system design modules. Design process will include discussion of social issues and ethics, use of engineering economics as a tool to evaluate design alternatives. Use of descriptive statistics and regression to analyze experimental data. Improve written and oral communication skills through presentation of design project results. 4 hours of design studio per week. Prerequisite: BENG 2612.

BENG3213 Biomedical Engineering: Emerging Methods and Applications (Sp) Introductory course for undergraduate biomedical engineering students. Emerging biomedical engineering topics in the areas of tissue engineering, stem cell engineering, biomedical nanotechnology, medical imaging and biosensing, single molecule imaging, biomarker discovery and proteomics, gene therapy, drug delivery, and protein engineering. Designing and implementing biological engineering processes, nanodrug delivery and nanotechnologies based disease detection. Lecture 3 hours per week. Prerequisite: BIOL 2535, Pre- or Corequisite: BENG 3723.

BENG3712 Engineering Properties of Biological Materials (Fa) Measuring and predicting the physical, chemical, and biological properties of biological materials necessary for the analysis and design of production and processing systems. Lecture 2 hours per week. Prerequisite: BENG 2622.

BENG3723 Unit Operations in Biological Engineering (Sp) Design of basic unit operations typical of biological engineering practice; unit operations include pump-pipe, fan-duct, moist air (psychrometric) processes (cool/heater/humidifier/dryer), air mixing, aeration, and refrigeration; unit operations design will account for unique constraints imposed by biological systems. Lecture 2 hours and lab 3 hours per week. Corequisite: Lab component. Prerequisite: (MEEG 2403 or CHEG 2313) and (CHEG 3213 or CHEG 2313 or MEEG 3603).

BENG3733 Transport Phenomena in Biological Systems (Fa) Applications of the principles of kinetics and heat and mass transfer to the analysis and design of biological engineering processes. Biological engineering processes will encompass processes involving biological, chemical, and/or physical phenomena. Engineering properties of materials, loading, combined stress analysis, theories of failure. Systems approach in design, including safety, reliability and cost. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: MEEG 3013.

BENG4103H Honors Instrumentation in Biological Engineering (Sp) Theory and advanced applications of analog circuits, digital circuits, and commercial instruments involving biological materials. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BENG 2103 or ELEG 2103. (Same as BENG 4103H).

BENG4103 Instrumentation in Biological Engineering (Sp) Theory and advanced applications of analog circuits, digital circuits, and commercial instruments involving biological materials. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BENG 2103 or ELEG 2103. (Same as BENG 4103H).

BENG4113 Risk Analysis for Biological Systems
Course Descriptions

(Odd years, Fa) Principles of risk assessment including exposure assessment, dose response, and risk management. Methods of risk analysis modeling and simulation with computer-aided methods of risk analysis. Animal, food, and environmental systems. Prerequisite: MATH 2564 and BIOL 2133.

BENG4013 Bioprocessors & Bioinstrumentation (Odd years, Sp) Principles of biologically based sensing elements and interfacing techniques. Design and analysis methods of biosensing and transducing components in bioprocessors and bioinstrumentation. Design of biosensors and biotechnological instrumentation in bioprocessing, environmental, biomimetic, and biomedical engineering. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 3013 and consent of instructor.

BENG4133 Digital Remote Sensing and GIS (Irregular) Basic digital image processing techniques and geo-spatial analysis applied to monitoring of natural processes and resources. Course topics include introduction to electromagnetic radiation, concept of color, remote sensing systems, and light attenuation by atmosphere, objects and sensors. Advanced topics include data models, spectral transforms, spatial transforms, correction and calibration, geo-rectification, and image classification with hyperspectral and multi-spectral images acquired with aerial and satellite sensors. Prerequisite: GIS 1103 is integrated into the course throughout the semester. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 3013 and consent of instructor.

BENG4203 Biomedical Engineering Principles (Fa) Principles of Biomaterials Applied to the design and analysis of systems affecting human health. This is an introductory course focusing on fundamentals of physiological systems and modeling and how this relates to analysis and equipment design. Lecture 3 hours per week. Corequisite: Lecture 2 hours, lab 3 hours per week. May be repeated.

BENG440V Special Problems (Sp, Su, Fa) (1-4) Selected problems in biogeochemical engineering are pursued in detail. Prerequisite: senior standing. May be repeated for 4 hours.

BENG451V Honors Thesis (Sp, Su, Fa) (1-6) Directed research for a thesis in advanced research. Prerequisite: Honors candidacy. May be repeated for 6 hours.

BENG450V Special Topics in Biomedical Engineering (Irregular) Specific topics in biomed engineering not covered in other courses. May be repeated. May be repeated for 8 hours.

BENG4502 Special Topics in Biological Reactor Systems Design (Fa) Extension of principles of microbial growth kinetics and transport phenomena to the design of biological reactor systems used in biological engineering. Reactor systems using specially microbial biomass (activated sludge) for substrate utilization as well as biomass and product formation. Application areas such as bio-remediation, bioprocessing and organic (food/animal) waste treatment. Corequisite: Lab component. Prerequisite: MATH 3404. Pre-or Corequisite: BENG 3733.

BENG4703 Biotechnology Engineering (Sp) Introduction to biotechnology topics ranging from molecular biological engineering, bioprocess engineering, biopharmaceutical manufacturing and biosensors to FDA regulations, as well as engineering principles in the design of the systems in the aforementioned topic areas. Lecture 3 hour per week. Prerequisite: BIOL 2133, (Chem 2613 or CHEM 3603) and (MEEG 2403 or CHEG 2133).

BENG4803 Precision Agriculture (Odd years, Fa) Introduction to precision agriculture, benefits, spatial variability within and site of industry-standard management. Spatial data collection: sensors, GPS, yield monitoring, and remote sensing. Knowledge discovery from data: data processing, neural networks, genetic algorithms, and use of GIS.

Decision support systems. Variable-rate technology: real-time and map-based systems, variable-rate machinery, and smart control systems. Evaluation of economic/technical analysis. Students are expected to have basic computer skills and statistics knowledge. (same as CSES 4803). Corequisite: Lab component. Prerequisite: MATH 1213 and junior standing. BENG4803 Introduction to Biotechnology Engineering Design I (Fa) Design concepts for equipment and processes used in biological, food and agricultural industries. Initiation of comprehensive two-semester team-design projects; defining design objectives, developing functional/mechanical criteria, standards, reliability, safety, ethics and professionalism issues. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: consent of instructor. Corequisite: BENG 3732. Pre-or Corequisite: BENG 3733.

BENG4822 Senior Biological Engineering Design II (Sp) Continuation of BENG 4813. Design concepts for equipment and processes used in biological and agricultural industries. Completion of 2-semester team design projects. Construction, testing, and evaluation of prototypes. Written and oral design reports. Discussion of manufacturing methods, safety, ergonomics, analysis/synthesis/design methods as appropriate for particular design projects. Laboratory/design 4 hours per week. Prerequisite: BENG 4813.

BENG4903 Ecological Engineering Principles (Sp) Ecological engineering principles applied to the design and implementation of best management practices, and discussion of Total Maximum Daily Load (TMDL) principles and processes. Lecture 3 hours per week. Prerequisite: CVEG 3213 or MEEG 3503.

BENG5123 Imaging and Rapid Analysis of Enclosed Ecosystems (Irregular) Environmental and functional design of building, chambers, rooms and habitats to house/exhibit animals and plants. Advanced analytical techniques which incorporate physiological principles and system dynamics and interpersonal skills. Factors that influence design objectives, developing functional/mechanical criteria, standards, reliability, safety, ethics and professionalism issues. Lecture 2 hours, laboratory 3 hours per week. Prerequisite: BENG 4813.

BENG500V Advanced Topics in Biological Engineering (Irregular) Special problems in fundamental and applied research. Prerequisite: graduate standing. May be repeated for 6 hours.

BENG5103 Advanced Instrumentation in Biological Engineering (Even years, Sp) Applications of advanced instrumentation in biological systems. Emphasis on updated sensing and transducing technologies, data acquisition and analytical instruments. Lecture 2 hours, lab 3 hours per week. Corequisite: Lab component. Prerequisite: BENG 4813.

BENG5113 DIGITALRemote Sensing and GIS (Irregular) Basic digital image processing techniques and geo-spatial analysis applied to monitoring of natural processes and resources. Course topics include introduction to electromagnetic radiation, concept of color, remote sensing systems, and light attenuation by atmosphere, objects and sensors. Advanced topics include data models, spectral transforms, spatial transforms, correction and calibration, geo-rectification, and image classification with hyperspectral and multi-spectral images acquired with aerial and satellite sensors. Raster GIS is integrated into course throughout the semester. Will use software such as ENVI, ArcGIS and ArcView. Requires a class project in the student’s area of interest. Lecture 2 hours, lab 3 hours per week. Students may not earn credit for both BENG 5113 and BENG 4133. Corequisite: Lab component. Prerequisite: MATH 3404. Corequisite: Lab component. Prerequisite: MATH 3404.

BENG5123 Imaging and Rapid Analysis of Biological and Agricultural Materials (Irregular) Techniques of imaging and non-invasive analyses of biological and agricultural materials. Covering spectral sensing (x-ray, UV, VIS, IR), optics, image processing, neuroanatomy, on-line monitoring and vision-based controls. Applications to automated food/fruit inspections, detect/contaminant detection, and characterization of materials in real-time on processing lines. Prerequisite: BENG 4103.

BENG5203 Mathematical Modeling of Physiological Systems (Sp) Application of mathematical techniques to physiological systems. The emphasis will be on understanding the normal and abnormal functioning of the cardiovascular system topics include models of blood cells, oxygen transport, cardiac output, cardiac regulation, and circulation. Background in biology and physiology highly recommended. Lecture 3 hours per week. Prerequisite: MATH 3404.

BENG5213 Introduction to Bioinformatics (Odd years, Sp) Application of algorithmic techniques to the study and solution of biological problems. Introduction to computational biology includes an introduction to molecular biology and recombinant DNA technology, biological sequence comparison, and phylogenetics, as well as topics of current interest. (Same as CSCE 5213.)

BENG5223 Biomedical Engineering Research Internship (Sp, Su) Minimum six-week program (possibly up to several months) in a medical research environment working on an on-going research project. Possible specialty areas include Anesthesiology, Cardiology, Informatics, Orthopaedics, Oncology, Pulmonology, and Radiology. Prerequisite: graduate standing and approval of director.

BENG5233 Tissue and Cell Engineering (Fa) This course introduces students to biological engineering and clinical aspects of tissue and cell engineering. The introduction to stem cells and histology are reinforced with a companion lab that introduces cell culture techniques and illustrates functional and structural aspects of various biological tissues. Topics include Cell Signalling, Transport and Kinetics, Bio-Membranes, Tissues and Tissue Engineering, Ethical and Regulatory Considerations. Two to three lecture hours per week plus three lab hours per week. Corequisite: lab component. Prerequisite: MATH 3404 and CHEM 3813.

BENG5253 Bio-Mems (IR) Topics include the fundamentals of microfabrication, NanoScales, Equations, Substrate fabrication, bio/abio interfacing technology, bio/abio hybrid integration of microfabrication technology, and various biomedical and biological problems that can be addressed with microfabrication technology and the engineering changes associated with it. Lecture 3 hour per week. Prerequisites: MEEG 3503 or CVEG 3213 or CHEG 2133. (Same as ECEG 5253)

BENG5263 Biomedical Engineering Principles (Fa) Engineering principles to the design and analysis of systems affecting human health. This is a course focusing on fundamentals of physiological systems and modeling. Topics include: brief overview of anatomy and physiology, cytoarchitectural phenomena and cellular organization, fundamental modeling, cardiovascular system, biomechanics, computational biology. Requires a background in circuits, fluid dynamics, mechanics, biology, and chemistry. Lecture 3 hours per week. Prerequisite: MEEG 3503 or CVEG 3213 or CHEG 2133. (Same as ECEG 5263)

BENG5265 Bio-Mems (IR) Topics include the fundamentals of microfabrication, NanoScales, Equations, Substrate fabrication, bio/abio interfacing technology, bio/abio hybrid integration of microfabrication technology, and various biomedical and biological problems that can be addressed with microfabrication technology and the engineering changes associated with it. Lecture 3 hour per week. Prerequisites: MATH 3404 or equivalent and graduate standing. May be repeated.

BENG5513 Simulation Modeling of Biological Systems (Irregular) Application of computer modeling and simulation of discrete-event and continuous-time systems to solve biological and agricultural engineering problems. Philosophies and ethics of representing complex processes in simplified form. Deterministic and stochastic modeling of complex systems, algorithm development, application limits, and simulation interpretation. Emphasis on calibration, validation and testing of biological systems models for the purposes of system optimization, resource allocation, real-time control and/or conceptual understanding. Prerequisite: AGST 4023 or BIAT 4003 or INEG 3333.

BENG5703 Design and Analysis of Experiments for Engineering Research (Irregular) Principles of planning and design of experiments for engineering research. Propagation of experimental error: improving precision of experiments. Analysis of experimental data for optimal design and control of engineering systems using computer techniques. Students must have an introductory background in statistics. Lecture may not earn credit for both BENG 5263 and BENG 4203. Prerequisites: MATH 3404 and equivalent and graduate standing. May be repeated.

BENG5713 Food Product and Process Development (Odd years, Fa) Multidisciplinary approaches for developing new food products and processes for the total food industry and use of industry in the development of future food systems. Emphasis on dynamic and interpersonal skills. Factors that influence product and process development. Analysis and modeling applied to food process design. Lecture 1 hour, laboratory 6
BENG543 Food Safety Engineering (Even years, Fa) Principles of engineering methods applied to food and safety and sanitation. Principles of engineering methods applied to food safety and security. Discussion of thermal, chemical, and physical intervention or sterilization food processing. Demonstration of monitoring and detecting techniques for food safety, including image analysis, biosensors and modeling. Lecture 3 hours per week. Prerequisite: BENG 4103 and EDSC 4134 (or equivalent).

BENG5733 Advanced Biotechnology Engineering (Odd Years, Fa) Applications of the principles of bioprocess/biochemical engineering to microbiological and biomedical problems: including enzyme engineering, metabolic engineering, molecular genetics and control, and bioinformatics and nanobiotechnology in addition to classical applied enzyme and cell-growth kinetics and advanced bioreactor design. Prerequisite: BENG 3793 or CHEG 5551.

BENG5743 Biotechnology Engineering (Sp) Introduction to biotechnology topics ranging from molecular biological engineering, bioprocess engineering, biopharmaceutical manufacturing and biosensors to FDA regulations, as well as engineering principles in the design of the systems in the aforementioned topic areas. Requires background in microbiology, organic chemistry and thermodynamics. Lecture 3 hours per week. Students may not earn credit for both BENG 5743 and BENG 4703.

BENG5801 Graduate Seminar (Sp) Reports presented by graduate students on topics dealing with current research in agricultural engineering. Prerequisite: graduate standing.

BENG5903 Water Quality Modeling and Management (Irregular) Processes and methodologies associated with aquatic ecosystem modeling, investigation of management processes based on modeling results. Process from simple steady-state spreadsheet models (to understand aquatic biosystems modeling) to complex GIS-based dynamic models with calibration and validation statistics for model applications. Students will develop a semester project that integrates their skills and knowledge in parameterizing, calibrating, and validating water quality models for freshwater systems. Prerequisite: BENG 5913.

BENG5913 Bioremediation and Biodegradation (Irregular) Environmentally-relevant biotechnology using organisms to remove or metabolize environmental pollutants through microbial degradation and phytoremediation of recalcitrant compounds. Benefits as well as potential costs of environmental applications of biotechnology will be evaluated.

BENG5923 Nonpoint Source Pollution Control and Management (Irregular) Basic concepts of hydraulic engineering, management and use land factors on nonpoint source (NPS) pollution in urban and agricultural watersheds. Discussion of water quality models to develop NPS pollution control plans and total maximum daily load (TMDLs), with consideration of calibration, validation, and uncertainty analysis. Prerequisite: BENG 4903 or CVEG 3232.


BENG5943 Ecological Engineering Principles (Sp) Engineering principles involved in assessment and management of ecosystems. Includes frequency analysis of rainfall, infiltration, runoff, and evapotranspiration. Use of GIS/mathematical models to quantify extent of ecological pollution. Design/implementation of best management practices and discussion of Total Maximum Daily Load (TMDL) principles and processes. Lecture 3 hours per week. Students may not earn credit for both BENG 5439 and BENG 4903. Prerequisite: CVEG 4943 or equivalent.

BENG5953 Ecological Engineering Design (Fa) Design of low impact development techniques to enhance ecological services, reduce peak runoff, and capture sediments and contaminants resulting from urban development. Techniques may include: bio-swales, retention basins, filter strips. Design of sustainable ecological processes for the treatment and utilization of wastes/residues.

Techniques may include: direct land application to soils/crops, composting systems, lagoons and constructed wetlands. Design goals include maintaining designated uses of land, water and air; including enhancement of habitat for wildlife and recreation, and the discovery of economically viable methods for co-existence of urban and agricultural land uses. Lecture 3 hours per week. Students may not earn credit for both BENG 4953 and BENG 4923. Prerequisite: BENG 4903 or equivalent. May be repeated.

BENG600V Master’s Thesis (Sp, Su, Fa) Prerequisite: graduate standing.

BENG700V Doctoral Dissertation (Sp, Su, Fa) Prerequisite: candidacy.

Biology (BIOL)

BIOL1541M Honors Principles of Biology Laboratory (Sp, Fa) This course is designed for the well-prepared student in the Honors program. It focuses on teaching students experimental and observational techniques used in the science of biology. It emphasizes the acquisition and interpretation of results that illustrate the major principles of biology. Corequisite: BIOL 1543 or BIOL 1543. (Same as BIOL 1541L)

BIOL1541L Principles of Biology Laboratory (Sp, Su, Fa) Experimental and observational techniques used in biology with emphasis on the acquisition and interpretation of results that illustrate the major biological principles. Corequisite: BIOL 1543. (Same as BIOL 1541L)

BIOL1543H Honors Principles of Biology (Sp, Fa) This course is designed for the well prepared student in Honors program. It focuses on the principles that unify the science of biology. Students will be exposed to how scientific principles have been used to demonstrate that all organisms are the products of evolution and are parts of interacting systems from the molecular to the ecosystem level. Corequisite: BIOL 1543L or BIOL 1541L. (Same as BIOL 1543L)

BIOL1601M Honors Principles of Zoology Laboratory (Sp, Su, Fa) (Formerly ZOOL 1611M) Laboratory exercises illustrating animal structure, physiology, genetics, and ecology. Corequisite: BIOL 1603. (Same as BIOL 1601L)

BIOL1601L Principles of Zoology Laboratory (Sp, Su, Fa) (Formerly ZOOL 1611L) Laboratory exercises illustrating animal structure, physiology, genetics, and ecology. Corequisite: BIOL 1603. (Same as BIOL 1601L)

BIOL1603M Principles of Zoology (Sp, Fa) (Formerly ZOOL 1611M) Introduction to zoological principles relating to cells, organ systems, development, genetics, ecology, and animal phyla. Corequisite: BIOL 1601L or BIOL 1601L. May be repeated.

BIOL1611L Plant Biology Laboratory (Sp, Su) (Formerly BOTY 1611L) Pre- or Corequisite: BOTY 1613. Lecture 3 hours per week. Prerequisite: BIOL 1543 or BIOL 1543L. May be repeated.

BIOL2103 General Microbiology (Sp, Fa) (Formerly MBIO 2103) Basic concepts of microbiology including diversity, genetics, metabolism, growth, control of growth, pathogenesis, and immunology. Corequisite: BIOL 1543 and BIOL 1541L. (Same as BIOL 2103)

BIOL2103H General Microbiology (Sp, Su, Fa) Basic concepts of microbiology including diversity, genetics, metabolism, growth, control of growth, pathogenesis, and immunology. Corequisite: BIOL 2101L or BIOL 2101M. Prerequisite: BIOL 1543 and BIOL 1541L and 2 semesters of general chemistry. (Same as BIOL 2103)

BIOL2211L Human Physiology Laboratory (Sp, Su, Fa) (Formerly ZOOL 2211L) Includes exercise on osmosis, reflexes, senses, muscle, cardiovascular system, metabolism, renal function, etc. Data collection, analysis, and report writing. Does not satisfy the Fulbright College writing requirement. Corequisite: BIOL 2213.

BIOL2323 General Genetics (Sp) Surveys Mendelian, molecular, and population genetics. Relates to clinical and medical genetics. Prerequisite: BIOL 1543 and BIOL 1541L.

BIOL2404 Comparative Vertebrate Morphology (Sp, Fa) (Formerly ZOOL 2404) Anatomy of selected vertebrates with emphasis on homologous structures and their adaptation to different environments. Lecture 3 hours per week. Corequisite: BIOL 1543 and BIOL 1541L and CHEM 1123 and CHEM 1121L and MATH 1203.

BIOL2321L General Microbiology II Laboratory (Sp, Fa) Applied microbiology with a variety of techniques. May require time outside laboratory period. Laboratory 3 hours per week. Pre- or Corequisite: BIOL 2323.

BIOL2323 General Genetics (Sp) Surveys of genetic principles and problems. Emphasis on understanding physiological response to genetic manipulation and experience in designing experiments. Lecture 3 hours per week. Corequisite: BIOL 2213.

BIOL2443 Human Anatomy Laboratory (Sp, Su, Fa) (Formerly ZOOL 2443) Laboratory exercises in mammalian anatomy. Cannot be taken without prior enrollment in BIOL 2443 or concurrent enrollment in BIOL 2443. Corequisite: BIOL 2443.

BIOL2443 Human Anatomy (Sp, Fa) (Formerly ZOOL 2443) Description of human body as a series of integrated systems and their interactions. Lecture 4 or 6 hours per week. BIOL 2443 and BIOL 2441L may not be counted for major in Zoology credit if prior credit in BIOL 2404 has been earned. Corequisite: BIOL 2404. Prerequisite: BIOL 1543 and BIOL 1541L.

BIOL2441L Human Anatomy Laboratory (Sp, Su, Fa) (Formerly ZOOL 2441L) Laboratory exercises in mammalian anatomy. Cannot be taken without prior enrollment in BIOL 2443 or concurrent enrollment in BIOL 2443. Corequisite: BIOL 2443.

BIOL2533 Cell Biology Laboratory (Sp, Fa) Introduction to methods and techniques used in Cell Biology research. Laboratory experiences to highlight topics covered in BIOL 2533. Pre- or Corequisite: BIOL 2533.

BIOL2533 Cell Biology (Sp, Fa) Introduction to cell structure, cell processes, biological polymers, energetics, and diversity. An introduction to biochemistry and cell chemistry. Pre- or Corequisite: CHEM 1123 and CHEM 1121L or (CHEM 1203 and CHEM 1201L) or (CHEM 1123 and CHEM 1121L) and MATH 1203.

BIOL2604 Survey of the Plant Kingdom (Sp) Structure, reproduction, and evolution of the plant kingdom. Lecture 2 hours, laboratory or field work 4 hours per week. Corequisite: Lab component. Prerequisite: BIOL 1613 and BIOL 1611L.

BIOL2653T Cell Biology Laboratory (Sp, Fa) Introduction to methods and techniques used in Cell Biology research. Laboratory experiences to highlight topics covered in BIOL 2533. Pre- or Corequisite: BIOL 2533.

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BIOL 3863 General Ecology (Sp, Fa) Ecological principles and concepts; environmental factors and interactions that determine distribution and abundance of organisms. Prerequisite: BIOL 2533. Corequisite: Lab component.

BIOL 3923H Honors Colloquium (Irregular) Covers a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in biology or chemistry). May be repeated for 6 hours.

BIOL 399VH Honors Course (Sp, Fa) (1-4) Prerequisite: junior standing. May be repeated for 99 hours.

BIOL 4003 Laboratory Techniques in Microbiology (Fa) Provides experience with laboratory techniques in microbiological physiology, metabolism, and genetics.

BIOL 4104 Taxonomy of Flowering Plants (Sp, Su) Identifying, naming, and classifying of wildflowers, weeds, trees, and other flowering plants. Emphasis is on the practical aspects of surveying and identifying plants. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 1613 and BIOL 2533 and BIOL 2323 and BIOL 3023.

BIOL 4124 Food Microbiology (Sp) (Formerly MBIO 4124) An introduction to basic microbial physiology, metabolism, and genetics with emphasis on function and regulation in eukaryotes, primarily animals. Prerequisite: BIOL 2533 and BIOL 2323 and BIOL 3023. Corequisite: Lab component. Prerequisite or Corequisite: BIOL 3023 or graduate standing.

BIOL 4124 Community Ecology (Odd years, Sp) Interactions between environment, population, and community structure. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 3863 and BIOL 4234 and BIOL 4443 and BIOL 4554 and BIOL 4793.

BIOL 4124 Protistology (Odd years, Sp) The biology of eukaryotes other than Animals, Land Plants, and Fungi with emphasis on morphology and modern approaches to phylogenetic systematics. Three lecture hours, four laboratory hours per week. Corequisite: Lab component or Corequisite: BIOL 3023 or graduate standing.

BIOL 4174 Fish Biology (Odd years, Sp) Morphology, classification, life history, population dynamics, and natural history of fishes and fish-like vertebrates. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component or Corequisite: BIOL 3023 or equivalent.

BIOL 4243 Primate Adaptation and Evolution (Sp, Su) Exploration of the neurological underpinnings of perception, action, and experience including how the brain processes information and interacts with the environment. Topics include the evolution of sensory systems, brain morphology, behavior, and cognitive processes. Prerequisite: BIOL 4513.

BIOL 4414 Comparative Anatomy (Odd years, Fa) Comparative anatomy of vertebrates with emphasis on the nervous systems, how neural wiring changes with special emphasis on advances since the Modern Synthesis. Historical, theoretical, and population genetics approaches are discussed. Recommended BIOL 3023 and BIOL 3863 and BIOL 4443 and BIOL 4513 and BIOL 4554 and BIOL 4574.

BIOL 4443 Molecular Virology (Odd years, Sp) Presents the molecular mechanisms underlying viral life-cycles; tropism and host cell recognition, penetration, genome replication, gene expression, transformation, assembly, nuclease packaging, and egress. Emphasis placed on experimental approaches. Lecture 3 hours per week. Corequisite: BIOL 4233 or BIOL 4323 and BIOL 4754 or BIOL 5253 or graduate standing.

BIOL 4446 Physiological Ecology of Animals (Odd years, Sp) Interactions between environment, population, and community structure. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 3863 and CHEM 1123 and CHEM 1121L or equivalent.

BIOL 4554 Developmental Biology (Sp) An analysis of the concepts of mechanisms of development emphasizing the experimental approach. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 2533 and BIOL 2323.

BIOL 4724 Protistology (Odd years, Fa) A comparative approach to organisms classically considered to be plants with emphasis on morphology, life history, development, and phylogeny. Three lecture hours, 4 hours lab per week.

BIOL 4724 Comparative Botany (Even years, Fa) A comparative approach to organisms classically considered to be plants with emphasis on morphology, life history, development, and phylogeny. Three lecture hours, 4 hours lab per week.

BIOL 4724 Ecology of Microorganisms (Even years, Fa) Study of microorganisms with emphasis on the tricks pathogens use and the body’s own defenses contribute to pathology. Prerequisite: BIOL 4703.

BIOL 4733 Physiological Ecology of Plants (Even years, Sp) Factors controlling ecosystem structure and function. Topics include population and species interactions, biogeochemical cycles, and climate change and ecosystem stability. Prerequisite: BIOL 3863 and CHEM 1123 and CHEM 1121.

BIOL 4751 Population Ecology Laboratory (Odd years, Sp) Laboratory experiences with population ecology, including the concepts of density, environment, and resource partitioning.

BIOL 4753 Advanced Invertebrate Zoology (Even years, Sp) Morphology, taxonomy, and behavioral ecology of invertebrates with an emphasis on the nervous systems, how neural wiring changes with special emphasis on advances since the Modern Synthesis. Historical, theoretical, and population genetics approaches are discussed. Recommended BIOL 3023 and BIOL 3863 and BIOL 4443 and BIOL 4513 and BIOL 4554 and BIOL 4754.

BIOL 4759 Introduction to Neurobiology (Sp) Survey of the neurological underpinnings of perception, action, and experience including how the brain processes information and interacts with the environment. Topics include the evolution of sensory systems, brain morphology, behavior, and cognitive processes. Prerequisite: BIOL 4513.

BIOL 4824 Community Ecology (Even years, Sp) Survey of theoretical and applied aspects of community structure, community ecology, and the physical environment of our nearest living relatives.

BIOL 4824 Special Topics in Microbiology (Irregular) (1-4) Consideration of new areas of microbiological knowledge not yet treated adequately in textbooks or in other courses. Prerequisite: 8 hours of biological sciences. May be repeated for 6 hours.

BIOL 4824 Special Topics in Zoology (Su) Discussion of recent outstanding zoological research of interest to zoology majors and public school science teachers. May be repeated with different instructor of a maximum of 6 hours of credit. Prerequisite: 8 hours of biological sciences. May be repeated for 6 hours.

BIOL 4824 Topical Issues in Biology (Sp, Su) (1-4) Prerequisite: senior standing. (Same as BIOL 499V) May be repeated for 8 hours.

BIOL 4824 Virology (Sp) (Formerly MBIO 4824) Virology: Principles of viral replication, structure and function, viral taxonomy, genetics and classification. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component.

BIOL 4824 General Virology (Sp) An introduction to viral life-cycles, structure, and host cell interactions. Emphasis placed on molecular and biochemical aspects of viral replication and genetics. Two hour lecture and one hour laboratory per week. Corequisite: BIOL 2533 and BIOL 3023.

BIOL 4824 Immunology (Sp) Taxonomy, morphology, behavior, and phylogeny of animal behavior. Prerequisites: BIOL 2013 and BIOL 2011L and BIOL 2533.

BIOL 4824 Animal Behavior (Odd years, Fa) Prerequisite: senior standing. May be repeated for 6 hours.

BIOL 4824 Honors Projects in Biological Sciences (Sp, Su) May be repeated with different instructor of a maximum of 6 hours of credit. Prerequisite: 8 hours of biological sciences. May be repeated for 6 hours.

BIOL 4824 Senior Thesis (Sp, Su) May be repeated with different instructor of a maximum of 6 hours of credit. Prerequisite: senior standing. (Same as BIOL 499V) May be repeated for 8 hours.

BIOL 4824 Independent Study (Biological Sciences) (1-4) Prerequisite: senior standing. (Same as BIOL 499V) May be repeated for 8 hours.

BIOL 4824 Independent Study (Biological Sciences) (1-4) Prerequisite: senior standing. (Same as BIOL 499V) May be repeated for 8 hours.
BIOL5001 Seminar in Biology (Sp, Fa) Discussion of selected topics and current literature in any area of the biological sciences. May be repeated for 2 hours.

BIOL5101 Bibliographic Practicum (Fa) Systematic survey of biological resources available on CD-ROM, through electronic journals, and on the Internet and World Wide Web. Prerequisite: senior or graduate standing.

BIOL5261L Cell Physiology Laboratory (Sp) Laboratory demonstrations of cell processes involved in growth, metabolism, transport, excitation, signaling and regulation in eukaryotes, primarily animals. Lecture 3 hours. Prerequisite: BIOL 2533 and BIOL 2531L and CHEM 3813 and PHYS 2032.

BIOL5264 Soil Microbiology (Odd years, Fa) A study of the microorganisms in soil and the biochemical processes for which they are responsible. Lecture 3 hours, laboratory 3 hours per week. Corequisite: lab component. Prerequisite: BIOL 2013 and BIOL 2011L.

BIOL529V Research in Physiology (Sp, Su, Fa) (1-6)

BIOL5323 Plant Growth and Growth Substances (Even years) Analysis and techniques employed in the study of plant growth and development with emphasis on growth substances. Prerequisite: BIOL 4304 and organic chemistry.

BIOL5334 Biochemical Genetics (Fa) Lectures and laboratories based on modern molecular genetic techniques for analyses of eukaryotes and manipulation of prokaryotes. A hands-on course in recombinant DNA techniques: laboratory practices in gene identification, cloning, and characterisation. Lecture 2 hours, laboratory 6 hours per week. Corequisite: Lab component. Prerequisite: BIOL 3233 (or equivalent) and CHEM 3813 (or equivalent).

BIOL5352L Immunology in the Laboratory (Sp) Laboratory demonstrations in diagnostic laboratorian using techniques and uses of antibodies as a research tool. Included are cell isolation and characterization procedures, immunochemistry, flow cytometry, ELISA and cell culture assay systems. Laboratory 6 hours per week. Prerequisite: POSC 5343 or BIOL 5343. (Same as POSC 5362LY/VTSC 5362LY).

BIOL5353 Ecological Genetics (Odd years, Fa) Analysis of the genetics of natural and laboratory populations with emphasis on the bases of evolutionary change. Prerequisite: BIOL 3323 and BIOL 3321L and MATH 2554 and STAT 2032 or equivalent.

BIOL536V Research in Evolutionary Genetics (Sp, Su, Fa) (1-6)

BIOL5423 Human Evolutionary Anatomy (Irregular) Paleobiologists reconstruct past lifeways and systematic relationships of our ancestors using comparative studies of human morphology and associated soft tissues. This course surveys methods and theories used to infer function and phylogeny, and details relevant aspects of the anatomy of humans, living great apes, and fossil human ancestors. Prerequisite: ANTH 1013 and BIOL 1543. (Same as ANTH 5423).

BIOL5433 Principles of Evolution (Even years, Fa) Advanced survey of the mechanisms of evolutionary change with special emphasis on advances since the Modern Synthesis. Historical, theoretical, and population genetics approaches are discussed. Recommended: BIOL 3023 and BIOL 3321L, and BIOL 3861L. Prerequisite: BIOL 3323 and BIOL 3861.

BIOL5433 Principles of Evolution (Odd years, Sp) Factors controlling ecosystem structure and function. Topics include paleoclimate and species migrations, current species alliances, biogeochemical cycles, and climate change and ecosystem stability. Prerequisite: BIOL 3864.

BIOL5511L Population Ecology Laboratory (Sp) Demonstration of the models and concepts from BIOL 5513. Pre- or Corequisite: BIOL 5513.

BIOL5513 Population Ecology (Sp) Survey of theoretical and applied aspects of populations processes stressing models of growth, interspecific interactions, and adaptations to physical and biotic environments. Corequisite: LAB 5511L. Prerequisite: BIOL 5513.

BIOL5523 Physiological Ecology (Even years, Sp) Effects of environmental factors on plant growth. Studies of light, temperature, soil, and soil moisture relationships will be emphasized. Prerequisite: BIOL 3864.

BIOL5524 Developmental Biology (Sp) An analysis of the concepts and mechanisms of development emphasizing the experimental use of the Drosophila melanogaster. Corequisite: Lab component. Prerequisite: BIOL 3863 and BIOL 3861Chemical and Biochemical Aspects of Evolution (Odd years, Sp) Abiotic synthesis of biomolecules on Earth, the origin of cells; genetic information, origin of life on Earth and elsewhere, evolution and diversity, ecological niches, bacteria, archaea, eukaryotes, novel metabolic reshaping of the environment, life being reshaped by the environment, molecular data and evolution.

BIOL5544 Comparative Vertebrate Embryology (Sp) Comparative study of the embryology of selected vertebrates through the types in mammals with special emphasis on humans. Lecture 2, laboratory 6 hours per week. Corequisite: Lab component. Prerequisite: BIOL 2014 or equivalent.

BIOL558V Research in Cell Biology (Sp, Su, Fa) (1-18) May be repeated for 18 hours.

BIOL559V Research in Embryology (Sp, Su, Fa) (1-6) Laboratory course on immune-diagnostic laboratory techniques, experimental design and data analysis. Field trip required. May be repeated for 99 hours.

BIOL5643 Invertebrate Phylogeny (Even years, Sp) Introduction to the principles and practice of phylogeny reconstruction and rigorous evaluation of animal relationships inferred from molecular and morphological characters. Emphasis will be on high-level phylogeny of invertebrate taxa. Prerequisite: BIOL 2814 or equivalent.

BIOL569V Research in Invertebrate Zoology (Sp, Su, Fa) (1-6)

BIOL5723 Fish Biology (Odd years, Sp) Morphology, classification, life histories, population dynamics, and natural history of fishes and fish-like vertebrates. Lecture 2-3 hours, laboratory arranged. Corequisite: Lab component. Prerequisite: 12 hours of biological sciences.

BIOL5743 Herpetology (Even years, Sp) Morphology, classification and ecology of amphibians and reptiles. Lecture 2 hours, laboratory 1 hour per week. Corequisite: lab component.

BIOL5763 Ornithology (Even years, Sp) Taxonomy, morphology, physiology, behavior, and ecology of birds. Lecture, laboratory, and field work. Corequisite: Lab component. Prerequisite: 10 hours of biological sciences.

BIOL5783 Mammalogy (Fa) Lectures and laboratory dealing with classification, morphology, distribution, ecology, behavior, and paleontology of mammals. Two lecture hours, 4 hours laboratory. Corequisite: Lab component.

BIOL579V Research in Vertebrate Zoology (Sp, Su, Fa) (1-6)

BIOL580V Research in Botany (Sp, Su, Fa) (1-6) May be repeated for 6 hours.

BIOL5814 Limnology (Odd years, Fa) Physical, chemical and biological conditions of inland waters. Lecture 3 hours per week, laboratory arranged. Corequisite: lab component. Prerequisite: CHEM 1123 and CHEM 1121L or equivalent, and 12 hours of biological sciences.

BIOL581V Research in Microbiology (Sp, Su, Fa) (1-6) Laboratory course on immune-diagnostic laboratory techniques, experimental design and data analysis. Field trip required. May be repeated for 99 hours.

BIOL5822 Animal Distribution (Even years, Fa) Physical, chronological, and biological factors affecting animal distribution, emphasizing terrestrial and fresh-water vertebrates.

BIOL5833 Animal Behavior (Odd years, Fa) Organization, regulation, and phylogeny of animal behavior, emphasizing vertebrates. Lecture, laboratory, and field work. Corequisite: lab component.

BIOL5844 Community Ecology (Even years, Sp) Survey of theoretical and applied aspects of community processes stressing structure, trophic dynamics, community interactions, and major community types. Corequisite: Lab component. Prerequisite: BIOL 3864.

BIOL585V Field Ecology (Sp, Su) (1-3) Project-oriented approach employing current field and laboratory techniques. Field trip required. May be repeated for 99 hours.

BIOL589V Research in Field Zoology (Sp, Su, Fa) (1-6)
and of the typical development of speech and language func-
tions for communicative purposes, with primary emphasis on the
pre-school and early school-age child. Corequisite: Lab compo-
ment. (Same as CDIS 3224)

CDIS3224 Language Development in Children
(Fa) Study of the nature of language behavior and of the
typical development of speech and language functions for com-
communicative purposes, with primary emphasis on the
preschool and early school-age child. Corequisite: Lab com-
ponent. (Same as CDIS 3224/4)

CDIS3233 Introduction to Clinical Practice (Sp, Fa)
An introduction to the various aspects of clinical opera-
tions including technical and interpersonal relationship skills
necessary for case management and a survey of profes-
sional agencies. Prerequisite: CDIS 2103.

CDIS3923H Honors Colloquium (Irregular)
Treats a special topic or issue, offered as part of the honors
program. Prerequisites: candidacy (not restricted to candidacy in speech or dramatic art). May be repeated for
99 hours.

CDIS399VH Honors Course (Irregular) (1-6)
Prerequisite: junior standing. May be repeated for 12 hours.

CDIS4001 Clinical Practicum Undergrad (Sp, Fa)
Entry-level training in speech-language clinical prac-
ticums. This course is taken for satisfactory or unsatisfac-
tory credit. Prerequisite: CDIS 2224 and CDIS 3203 and CDIS
3223. Course requirements include satisfactory completion of specific program requirements for admission to clinical practice.

CDIS4103 Sign Language and Deafness (Sp, Su)
An introduction to American Sign Language (ASL) and the
Deaf Community that uses it. This class will study expressive
and sign languages using ASL vocabulary, structure and
grammar. The Deaf Community will be studies through
purposes and problems of various forms of communication
including technical and interpersonal relationship skills
necessary for case management and a survey of profes-
sional agencies. Prerequisite: CDIS 2103.

CDIS3224 Language Development in Children
(Fa) Study of the nature of language behavior and of the
typical development of speech and language functions for com-
communicative purposes, with primary emphasis on the
preschool and early school-age child. Corequisite: Lab com-
ponent. (Same as CDIS 3224/4)

CDIS3233 Introduction to Clinical Practice (Sp, Fa)
An introduction to the various aspects of clinical opera-
tions including technical and interpersonal relationship skills
necessary for case management and a survey of profes-
sional agencies. Prerequisite: CDIS 2103.

CDIS3923H Honors Colloquium (Irregular)
Treats a special topic or issue, offered as part of the honors
program. Prerequisites: candidacy (not restricted to candidacy in speech or dramatic art). May be repeated for
99 hours.

CDIS399VH Honors Course (Irregular) (1-6)
Prerequisite: junior standing. May be repeated for 12 hours.

CDIS4001 Clinical Practicum Undergrad (Sp, Fa)
Entry-level training in speech-language clinical prac-
ticums. This course is taken for satisfactory or unsatisfac-
tory credit. Prerequisite: CDIS 2224 and CDIS 3203 and CDIS
3223. Course requirements include satisfactory completion of specific program requirements for admission to clinical practice.

CDIS4103 Sign Language and Deafness (Sp, Su)
An introduction to American Sign Language (ASL) and the
Deaf Community that uses it. This class will study expressive
and sign languages using ASL vocabulary, structure and
grammar. The Deaf Community will be studies through
purposes and problems of various forms of communication
including technical and interpersonal relationship skills
necessary for case management and a survey of profes-
sional agencies. Prerequisite: CDIS 2103.
ductory course in computer organization and architecture including topics in digital logic, digital systems, and memory structures (same as CSCE 3213).

**CENG3533 Computer Subsystem Design (Irregular)** Structured and automated design techniques for computer subsystems. Includes the application of sub-systems components and tools to design digital systems. Bus, I/O memory, interrupt controllers, disk systems, DMA controllers, and A/D and D/A converters. Prerequisite: CENG 2133 and CENG 2123.


**CENG3943 Engineering Applications of Unix (Sp)** Structure of Unix file system, use of exec and fork, interprocess communication and record locking. Prerequisite: CENG 2143.

**CENG3953 Logic Synthesis-VHDL (Fa)** Representation of digital signals in VHDL, VHDL design description, use of VHDL standard packages, representation of numbers in VHDL, design of arithmetic circuits using VHDL, VHDL for combinational circuits, VHDL sequential statements for registers and counters, VHDL code for finite state machines. Prerequisite: CENG 2123.

**CENG4113 Embedded Systems (Irregular)** The architecture, software, and hardware of embedded systems. Involves a mixture of hardware and software for the control of a system or a subsystem. Prerequisite: CENG 2123.

**CENG4123 Introduction to Computer Architecture (Sp)** Design of a single board computer including basic computer organization, memory subsystem design, peripheral interfacing, DMA control, interrupt control, and bus organization. Prerequisite: CENG 2123 and CENG 2133.

**CENG4213H Honors Introduction to Computer Architecture (Sp)** Design of a single board computer including basic computer organization, memory subsystem design, peripheral interfacing, DMA control, interrupt control, and bus organization. Prerequisite: CENG 2123 and CENG 2133.

**CENG4233 Low Power Digital Systems (Irregular)** The reduction of power consumption is rapidly becoming one of the key issues in digital system design. Traditionally, digital system design has mainly focused on performance and area trade-offs. This course will provide a thorough introduction to digital design for low power consumption at the circuit, logic, and architectural level. Prerequisite: CENG 2123 and ELEG 4803.

**CENG4223 Digital Circuit Testing and Testability (Irregular)** The complexity of digital circuits placed on IC chips is increasing at an exponential rate. Testing of such chips. Testing is performed to ensure that function/performance has not been altered during fabrication. This course introduces current testing techniques for digital circuits and tools that have been developed to enhance their testability. Prerequisite: CENG 2123.

**CENG4243 Programming Windows and the GUI (Irregular)** Introduction to the basic concepts of graphical user interface (GUI) programming using the Microsoft Windows environment. This course is an introduction to design techniques relating to color, size, shape, location, font, etc. Real-world applications will be programmed using Visual Basic C and C++. Prerequisite: CENG 2143 or CSCE 2143.

**CENG4333H Honors CPLD/FPGA-Based System Design (Irregular)** Field Programmable Logic devices (FPGAs/CPLDs) have become extremely popular as basic building blocks for digital systems. They offer a general architecture that users can customize by inducing permanent or reversible physical changes. This course will deal with the implementation of logic options using these devices. Prerequisite: CENG 2123 and Honors Standing.

**CENG4353 Software Based System Design (Irregular)** Field Programmable Logic devices (FPGAs/CPLDs) have become extremely popular as basic building blocks for digital systems. They offer a general architecture that can be customized by inducing permanent or reversible

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**Course Descriptions**

**CENG4423H Honors Computer Systems Analysis (Irregular)** Basic concepts of problem analysis, model design, and simulation experiments. A simulation will be introduced and used in this course. Prerequisite: INEG 3313 or STAT 3013. (Same as CENG 4423)

**CENG4423 Computer Systems Analysis (Irregular)** Basic concepts of problem analysis, model design, and simulation experiments. A simulation will be introduced and used in this course. Prerequisite: INEG 3313 or STAT 3013 and proficiency in a programming language.

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**CENG4533 Object-Oriented Programming and Design (Fa)** Indepth coverage of the methods and techniques of object-oriented design and its applications to database and artificial intelligence. Prerequisite: CENG 3943.

**CENG4671 Senior Design Project I (Sp, Fa)** (Formerly CENG 4571) Students complete comprehensive design project during their final year of undergraduate studies. The project is done over 2 semesters in phases: design, formal proposal, implementation, and presentation. The projects include and require the integration of hardware, software, and human factor elements and are developed to standard engineering specifications. Prerequisite: satisfactory completion of at least 4 of the following courses: CENG 2123, CENG 2143, and ELEG 4803, and the completion of at least 6 hours of technical electives.

**CENG4753 Computer Networks (Fa)** This course is an introduction to computer networks. Using the Internet as a vehicle, this course introduces underlying concepts and principles of modern computer networks, with emphasis on protocols, architectures, and implementation issues.

**CENG4813 Computer Graphics (Irregular)** Introduction to computer graphics, software, and hardware. Includes graphic display units, the viewpoint, the window, graphic inputs and graphic outputs. Prerequisite: CENG 2143.

**CENG4823 Advanced Computer Graphics and Animation (Irregular)** Advanced topics in the generation of computer graphics and animation imagery concentrating on non-procedural approaches. Topics include physical modeling, transformations, light modeling, and rendering algorithms. Theoretical issues include the graphics pipeline and rendering equation. Practical issues include the use of industry standard graphics libraries and rendering hardware and efficiency. Prerequisite: CENG 4813.

**CENG4883 Introduction to Image Processing (Irregular)** Introduction to basic concepts of image processing; theory and applications. Covers digital methods of image restoration; deformation, extraction and analysis. Prerequisite: CENG 2143 or CSCE 2143. Corequisite: CENG 4490V or CSCE 4490V (same as ELEG 4803).

**CENG4912H Honors Thesis (Sp, Fa)** To provide honors students with experience in presenting their research accomplishments to their peers and faculty. Prerequisite: honors standing.

**CENG4953 Minicomputer Applications (Irregular)** Structure, implementation, and application of minicomputer systems, microcomputer hardware, microprogramming, mini-computer software technology, and design and evaluation of minicomputer systems. Prerequisite: CENG 3943.

**CENG4973 Senior Design Project II (Sp, Fa)** Computer Engineering students complete 2 comprehensive design projects during the Fall and Spring Semesters. Prerequisite: CENG 4123 or Honors Standing.

**CENG5013 Topics in Computer Hardware (Irregular)** Advanced features of computer hardware. Topics include: computer systems design, direct memory access techniques, and electro-optical signal conversion and EPROM applications. Corequisite: Lab component. Prerequisite: CENG 4213 or equivalent and graduate standing.

**CENG5023 SOFTWARE ENGINEERING I (IR)** A study of design and development used in software and computer systems engineering. Topics include project planning, requirements analysis, software design fundamentals, quality assurance, and software testing and maintenance.

**CENG5033 Software Engineering II (Irregular)** A study in software project design and management. The class defines and develops a semester project carrying out the planning, requirements analysis, software and systems design, system quality assurance, as well as software testing and maintenance. Prerequisite: CENG 5023.

**CENG5043 Real-Time Operating Systems (Irregular)** A study and implementation of a real-time operating system for process control applications. The student will design and implement a small microprocessor system. Prerequisite: graduate standing.

**CENG5083 Digital Circuit Design Verification (Irregular)** A study of the principles of formal verification as a method of simulation and testing in the elimination of logical design errors in digital systems. Prerequisite: CENG 2123 and graduate standing.

**CENG5093 Fault-Tolerant System Design (Irregular)** Fault-tolerance is concerned with making or recovering from the effects of faults in a digital system, once they have been detected. On-line fault detection is often required before the fault recovery process. This course will familiarize students with currently available techniques for self-checking and fault-tolerant digital system design.

**CENG510V Special Problems (Irregular) (1-6)** May be repeated for 6 hours. Prerequisite: CENG 2123 and graduate standing.

**CENG5153 Real-Time Data Acquisition Systems (Irregular)** The theory and practice associated with taking measurements of the real world for use with computers. Sampling and data analysis techniques. Prerequisite: graduate standing.

**CENG5213 Interactive Computer Graphics (Irregular)** Basic concepts involved in the generation and display of computer graphics. Topics include hardware, software, rendering techniques, and device independent graphics. Prerequisite: working knowledge of a programming language.

**CENG5333 Knowledge-Based Systems (Irregular)** Expert systems, structured knowledge representation, and rule-based inference systems. Prerequisite: graduate standing.

**CENG5613 Introduction to Telecommunications (Fa)** Overview of public and private telecommunication systems, traffic engineering, communications systems basics, information technology, electromagnetics, and data transmission (same as ELEG 5613). Prerequisite: graduate standing. (Same as ELEG 5613)

**CENG5633 Network Performance Evaluation (Irregular)** A study of performance modeling tools for telecommunication networks, computer networks, and wire- less networks. Prerequisite: STAT 3013 or equivalent and graduate standing.

**CENG5643 Computer Communications Networks (Irregular)** A study of computer communication networks, including the data link layer, routing, flow-control, local area networks, TCP/IP, ATM, B-ISDN, queuing analysis, and recent developments in computer communications. Prerequisite: graduate standing.

**CENG5653 Network Security (Sp)** This course introduces security and secrecy in a networked environment. It is intended to familiarize students with the elements of secure communication, and how they inter-relate to provide secure networks in public and private settings. Prerequisite: graduate standing.

**CENG5683 Image Processing (Irregular)** Concepts involved in the processing of digital images. Emphasis on image analysis, enhancement, and restoration. Both spatial and frequency domain approaches are presented. Prerequisites: graduate standing and working knowledge of statistics and a programming language.

**CENG5801 Seminar (Sp, Fa)** Oral presentations given by graduate students on subjects dealing with current topics in computer engineering and computer science. Prerequisite: graduate standing.

**CENG581V Master’s Research Project and Report (Sp, Su, Fa) (1-6)** Required course for report only. Prerequisites: graduate standing and Computer Networks I. May be repeated for 6 hours. Prerequisites: CENG 5903 Advanced Computer Architecture (Irregular) A study of advanced architectural techniques employed in modern, general-purpose computers with emphasis on uniprocessor systems, uniprocessor technology support for instruction-level parallelism (branch prediction, multiple instruction issue, speculative execution, compiler optimizations for LP), advanced memory system design, high-performance I/O. Multiprocessor topics: cache coher-
CHEG1113 Introduction to Chemical Engineering (Fa)
Introduction to the field of chemical engineering. Industries, careers, and the curriculum are discussed. Basic chemical engineering concepts and calculations are presented. Mass balance calculations are performed and the application of computers to chemical engineering problems is introduced.

CHEG2111 Introduction to Chemical Engineering II (Sp, Su) Multiple-reaction, multi-unit mass balances; vapor-liquid equilibria, enthalpy balances; rate concepts; thermodynamics and equilibrium stage concepts; engineering economics; professionalism; ethics; computer applications; and introduction to process simulation. Prerequisite: CHEG1113 and CHEM 1123 (or CHEM 1132).

CHEG1135 Fundamentals of Chemical Engineering (Sp, Su) This course is a combination of CHEG 1113 and CHEG 1123 for transfer students and students required to repeat CHEG 1113 or 1123. Basic chemical engineering terms, concepts and calculations are presented. Topics include units; dimensions and conversions; and theoretical models for solving problems; mass balances with and without chemical reaction; gases, vapors, liquids and solids; energy balances with and without chemical reactions; and simultaneous mass and energy balances. Prerequisite: CHEM 1103 or CHEM 1123.

CHEG1212L Chemical Engineering Laboratory I (Sp, Fa) Experimental measurements of various physical properties and thermodynamic properties; published values and theoretical predictions. Interpretation of results using graphical, numerical and statistical tools, and presentation of results in written technical reports and oral briefings. Corequisite: Drill component. Prerequisite: CHEM 1103 or CHEM 1123. CHEG2133 Fluid Mechanics (Sp, Su) Analysis and design of fluid systems and fluid systems. Application of the principles of fluid statics, fluid dynamics, compressible flow, etc. Prerequisite: MATH 2564 and (CHEG 1123 or junior standing).

CHEG1221L Chemical Practice Seminar (Fa) Discussion and experimental exercises in interpersonal relations, communication skills (including formal oral and written reports), group dynamics, leadership, professionalism, and ethics. Prerequisite: CHEG 1212L.

CHEG2313 Thermodynamics of Single-Component Systems (Sp, Su, Fa) A detailed study of the thermodynamic “state” principles; energy and energy balances, first and second law principles, and stoichiometric balances involving single-component physical systems and processes. Prerequisite: CHEG 1123 or CHEG 1135 or junior standing.

CHEG3143H Honors Heat Transport (Sp, Fa) Application of the principles of conduction, convection and radiation to the analysis and design of heat transfer equipment and systems such as double-pipe and shell-and-tube heat exchangers, multiple-effect evaporators, condensers, and boilers. Prerequisite: CHEG 2133 and CHEG 2313. (Same as CHEG 3143)

CHEG3143 Heat Transport (Sp, Fa) Application of the principles of conduction, convection and radiation to the analysis and design of heat transfer equipment and systems such as double-pipe and shell-and-tube heat exchangers, multiple-effect evaporators, condensers, and boilers. Prerequisite: CHEG 2133 and CHEG 2313. (Same as CHEG 3143)

CHEG3232L Chemical Engineering Laboratory II (Sp, Fa) Experimental investigations of fluid flow and heat transfer. Complete written reports are required. Pre- or Corequisite: CHEG 2322L. Corequisite: Drill component. Prerequisite: CHEG 1212L and CHEG 2221.

CHEG3235 Chemical Engineering Computer Methods (Fa) Application of computer methods to chemical engineering problems including a review of structured programming problem. Pre- or Corequisite: CHEG 3143 and CHEG 3323. Corequisite: Drill component.

CHEG3323H Honors Thermodynamics of Multi-Component Systems (Sp, Su) The use of the state principle and principles of entropy and energy balance. Prerequisite: CHEG 1113 and CHEG 3323. (Same as CHEG 3323)

CHEG3323 Thermodynamics of Multi-Component Systems (Sp, Su, Fa) The use of the state principle and principles of entropy and energy balance. Prerequisite: CHEG 1113 and CHEG 3323. (Same as CHEG 3323)

CHEG3333H Chemical Engineering Reactor Design (Sp, Su) Principles of kinetics of homogeneous and heterogeneous reactions, catalysis, and reactor design with applications, drawn from industrial processes. Prerequisite: CHEG 3323. (Same as CHEG 3333)

CHEG3333 Chemical Engineering Reactor Design (Sp, Su) Principles of kinetics of homogeneous and heterogeneous reactions, catalysis, and reactor design with applications, drawn from industrial processes. Prerequisite: CHEG 3323.

CHEG4163H Honors Equil Stage Mass Transfer (Fa) Applications of chemical engineering design to stage-wise and continuous separations in systems approaching equilibrium. Prerequisite: CHEG 3323. (Same as CHEG 4163)

CHEG4163 Equil. Stage Mass Transfer (Fa) Applications of chemical engineering design to stagewise and continuous separations in systems approaching equilibrium. Prerequisite: CHEG 3323.

CHEG4413 Chemical Engineering Design I (Sp, Su, Fa) Design of new high performance central processing units and multithreaded architectures will be covered. Prerequisite: graduate standing.

CHEG4423 Chemical Engineering Design II (Sp, Fa) Design of new high performance central processing units and multithreaded architectures will be covered. Prerequisite: graduate standing.

CHEG4443 Chemical Engineering Honors Design II (Sp, Fa) Responsibility for decision making is given to the students in the solution of an industrial process. Both formal oral and formal written presentation of results are required. Corequisite: Drill component. Prerequisite: CHEG 4423.

CHEG4443H Chemical Engineering Honors Design II (Sp, Fa) Same as CHEG 4443H.

CHEG4444 Chemical Engineering Process Safety (Sp, Fa) Application of chemical engineering principles to the study of safety, health, and loss prevention. Fires and explosions, hygiene, toxicology, hazard identification, and risk assessment in the chemical process industries. Prerequisite: senior standing. (Same as CHEG 4444)

CHEG448V Special Problems (Sp, Su, Fa) (1-6) Prerequisite: senior standing. May be repeated up to 6 hours.

CHEG4913 Environmental Engineering Chemodynamics (Irregular) The course focuses on the application of chemical engineering fundamentals to the understanding and solution of multimedia environmental pollution problems. It includes study of intra- and inter-phase environmental mass transport, equilibrium distribution of contaminant species between the geosphere, air, soil and water. CHEG5112 Membrane Separation and System Design (Sp) Theory and system design of cross flow membrane processes—reverse osmosis, nanofiltration, ultrafiltration, and microfiltration—and applications for pollution control, water treatment, food and pharmaceutical processing. Prerequisite: CHEG 3153.

CHEG5033 Technical Administration (Fa) Means and methods of planning, organizing, supervising, coordinating, and financing research, development, and engineering activities. Prerequisite: senior or graduate standing.

CHEG5113 Transport Processes I (Sp) Fundamental concepts and laws governing the transfer of mass, energy, and momentum. Prerequisite: CHEG 2313 (or equivalent) and MATH 3404.

CHEG5133 Advanced Reaction Design (Fa) Applied reaction kinetics with emphasis on the design of heterogeneous reaction experiment will be required. Prerequisite: senior or graduate standing.

CHEG5273 Corrosion Control (Sp) Qualitative, and quantitative introduction to corrosion and its control. Application of the fundamentals of corrosion control in the process industries is emphasized. Prerequisite: CHEG 2313.

CHEG5322 Chemical Laboratory III (Sp, Su) Experimental investigations of heat and mass transfer. Special attention to attaining a high order of accuracy and to presenting results in complete written reports, with emphasis on quality rather than quantity work performed. Pre-or Corequisite: CHEG 3153 and CHEG 4163.

CHEG5441 Chemical Engineering Design I (Sp, Su, Fa) Design of new high performance central processing units and multithreaded architectures will be covered. Prerequisite: graduate standing.

CHEG5442 Chemical Engineering Design II (Sp, Su) Design of new high performance central processing units and multithreaded architectures will be covered. Prerequisite: graduate standing.
neous reacting systems including solid surface catalysis, enzyme catalysis, and transport phenomena effects. Various types of reactors such as packed bed, fluidized beds, and other non-ideal flow systems are considered.

Prerequisite: MATH 3404 and CHEG 3333. CHEG 5213 Advanced Chemical Engineering Calculus of variations and optimization. Problems of analysis and solution to the equations and mathematical models of chemical processes and mechanisms. Prerequisite: CHEG 3333 and CHEG 3253. CHEG 5223 Petroleum Processing (Irregular) Introduction to petroleum production, feedstock processing, and transportation. Prerequisite: CHEG 4413.

CHEG 5273 Corrosion Control (Sp) Qualitative and quantitative introduction to corrosion and its control. Application of corrosion control to the production, storage, and transportation of materials. Emphasized is the prevention of corrosion damage. Prerequisite: CHEG 2313.

CHEG 5313 Planetary Atmospheres (IR) Origins of planetary atmospheres, structures of atmospheres, climate evolution, dynamics of atmospheres, levels in the atmosphere, upper atmosphere, escape of atmospheres, and comparative planetology of atmospheres. (Same as SPAC 5313)

CHEG 5333 Advanced Thermodynamics (Fa) Methods of statistical thermodynamics, the correlation of classical and statistical thermodynamics, and the theory of thermodynamics of continuous systems (non-equilibrium thermodynamics). Prerequisite: CHEG 3203.

CHEG 5353 Advanced Separations (Sp) Phase equilibrium in non-ideal and multicomponent systems, digital and other methods of computation are included to cover the fundamental theories of distillation, absorption, and extraction. Prerequisite: CHEG 4163.

CHEG 5403 Organic Technology (Irregular) Major unit processes in the organic chemical field with emphasis on industrial aspects of the thermodynamic, kinetic, and economic problems associated with the manufacturing and utilization of synthetic organic chemicals. Prerequisite: CHEM 3633 or CHEM 3613.

CHEG 5513 Biochemical Engineering Fundamentals (Sp) An introduction to bioprocessing on modern biochemical engineering techniques and biotechnology. Topics include: basic metabolism (procaiyotic and eucaryotic), biochemical pathways, fermentation kinetics (including immobilized processes), separation processes (e.g. chromatography) and recombinant DNA methods. Material is covered within the context of mathematical descriptions (calculus and algebra) of biochemical phenomenon. Prerequisite: CHEG 3143.

CHEG 5553 Bioprocessing (Fa) An introduction to the design, development, and scale-up of bioprocesses for the production of chemicals by fermentation. Major topics include fermentation kinetics, reactor design, process scale-up, and product recovery. Prerequisite: CHEG 3333.

CHEG 5631 Microelectronics Fabrication and Materials (Fa) Overview of semiconductor microelectronics and semiconductors with emphasis placed on the manufacturing process rather than device physics. Topics include the various types of devices, the manufacturing flow, and criteria for material selection. Prerequisite: CHEG 3143.

CHEG 5713 University of Chemistry I Laboratory (Sp, Su) Lecture 3 hours, recitation 1 hour per week. Corequisite: CHEM 1211L. Students may not receive credit for both CHEM 1211L and CHEM 1103L. Pre- or Corequisite: CHEM 1223 and CHEM 1103. May be repeated for a maximum of 3 hours.

CHEG 5700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

CHEM 101L Basic Chemistry for Health Sciences Laboratory (Sp, Su, Fa) Laboratory exercises and practice applicable to Basic Chemistry. Meets 3 hours per week. Pre- or Corequisite: CHEM 1023.

CHEM 1023 Basic Chemistry for Health Sciences (Sp, Su, Fa) For students in Associate Degree in Nursing (ADN) program and allied health fields. Basic concepts in general, inorganic and organic chemistry. Lecture 3 hours, recitation 1 hour per week. Corequisite: CHEM 1021L.

CHEM 1051L Chemistry in the Modern World Laboratory (Sp) Laboratory exercises appropriate to Chemistry in the Modern World. Meets 2 hours per week. Pre- or Corequisite: CHEM 1015L.

CHEM 1053 Chemistry in the Modern World (Sp) The impact of chemical developments upon contemporary society. Chemical problems of ecological, environmental, nutritional, economic, and sociological concern. Designed for nonscience majors. Lecture 3 hours per week. Pre- or Corequisite: CHEM 1051L.

CHEM 1071L Fundamentals of Chemistry Laboratory (Su) Lab exercises in principles and practices of Fundamental Chemistry. Meets 2 hours per week. Pre-or Corequisite: CHEM 1074.

CHEM 1074 Fundamentals of Chemistry (Su, Fa) Fundamental principles of chemistry for students majoring in Home Economics or Nursing. Lecture 4 hours, recitation 1 hour per week. Pre- or Corequisite: CHEM 1071L.

CHEM 1101L University of Chemistry I Laboratory (Su, Fa) Laboratory exercises illustrating qualitative concepts and laboratory techniques in chemistry. Meets 3 hours per week for 1 credit hour. Pre- or Corequisite: CHEM 1103.

CHEM 1113 University Chemistry I (Su, Fa) Systematic description of the chemical elements and their compounds arranged in groups, according to the periodic system. Does not carry credit toward the major requirement for the B.S. degree in Chemistry. Prerequisite: CHEM 1103 and CHEM 1123.

CHEM 2103 Organic Physiological Chemistry (Sp, Su) Survey of organic chemistry necessary for understanding of biological systems, with some related physiological chemistry. Lecture 3 hours per week. Pre- or Corequisite: CHEM 2113L. Corequisite: CHEM 2113L.

CHEM 2123 Chemistry for Majors I (Fa) The first half of a two-semester course designed especially for students planning to major in chemistry or biochemistry. Students may not receive credit for both CHEM 1211L and CHEM 1103L. Pre- or Corequisite: CHEM 1211L. Corequisite: Drill component.

CHEM 2122L Chemistry for Majors II Laboratory (Sp) Laboratory 3 hours per week. Students may not receive credit for both CHEM 1212L and CHEM 1122L. Corequisite: CHEM 1223.

CHEM 2123 Chemistry for Majors II (Sp) The second half of a two-semester course designed especially for students planning to major in chemistry or biochemistry. Students may not receive credit for both CHEM 1223 and CHEM 1123. Pre-or Corequisite: CHEM 1212L. Corequisite: Drill component.

CHEM 2252 Analytical Chemistry Lecture (Sp, Su) Principles of chemical separations and analysis by classical and instrumental methods. The role of chemical equilibrium in physical and biological systems. Prerequisite for students in agriculture, biological, and physical sciences. Lecture 2 hours per week. Prerequisite: CHEM 1103L and CHEM 1124L (or CHEM 1074 and CHEM 1071L) and MATH 1203.

CHEM 2272 Analytical Chemistry Laboratory (Sp, Fa) Primarily for students in agricultural, biological, and physical sciences. Provides experience in the techniques of classical and instrumental methods of chemical separations and analysis. Lecture 1 hour per week. Prerequisites: CHEM 2262. Prerequisites: CHEM 1123 and CHEM 1126L (or CHEM 1074 and CHEM 1071L) and MATH 1203.

CHEM 2611T Chemistry Transfer Course CHEM 2611L Organic Physiological Chemistry Laboratory (Sp, Su) Laboratory 3 hours per week. Corequisite: CHEM 2613.

CHEM 2612 Organic Physiological Chemistry (Sp, Su) Survey of organic chemistry necessary for understanding of biological systems, with some related physiological chemistry. Lecture 3 hours per week. Pre- or Corequisite: CHEM 2611L. Corequisite: Drill component.

CHEM 2613 Forensic Chemistry (Fa) Survey of chemistry used in criminal investigations. Topics may include detection and identification of drugs, alcohol, toxins, explosives, and gun powder residue. Chemical analysis of paint, ink, paper, soil, glass and fibers. Chemical detection of blood and fingerprints. Extraction of DNA from evidence, DNA fingerprinting. Prerequisite: CHEM 3613 (recommended) or CHEM 2611.

CHEM 3451L Elements of Physical Chemistry Laboratory (Sp, Su) Techniques of physical measurements of chemical systems; error analysis and report writing. Experiments in thermodynamics, kinetics, and measurement of properties of matter using a variety of techniques. Laboratory 4 hours per week. Corequisite: CHEM 3453.

CHEM 3453 Elements of Physical Chemistry Lecture Fundamental concepts of physical chemistry primarily for B.A. Chemistry majors and pre-professional and agriculture students, presented with some recourse to calculus and with applications to life processes and biochemistry. Lecture 3 hours per week. B.A. chemistry students register for CHEM 3451L concurrently. Prerequisite: CHEM 2262 and CHEM 2272 and PHYS 2033 and PHYS 203L and MATH 2554 (or MATH 2043).
CHEM3504 Environmental Chemistry (Even years, Sp) Application of chemical principles and technical methods to predicting and controlling environmental problems, and the chemical interrelationships among these problems. Topics include the chemistry of fossil fuels, new energy sources, energy storage concepts, air pollution, mineral resources, solid wastes, water and wastewater treatment, and nuclear toxic materials. Does not carry graduate credit for chemistry majors.

Prerequisite: CHEM 1123 and CHEM 1121L and PHYS 2074.

CHEM4123 Advanced Inorganic Chemistry I (Fa) Reactions and properties of inorganic compounds from the standpoint of electronic structure and the periodic table. Emphasis on recent developments. Prerequisite: CHEM 3514.

CHEM4211 Instrumental Analysis Laboratory (Sp) Provides laboratory experience in parallel with the lecture material in CHEM 4211. Laboratory 3 hours per week. Pre- or Corequisite: CHEM 4213.

CHEM4213 Instrumental Analysis (Sp) Provides students, especially those in the agricultural, biological, and physical sciences, with an understanding of modern instrumental techniques of analysis. Lecture 3 hours per week.

Prerequisite: CHEM 2262 and CHEM 2272 and CHEM 3613 and Lab component. Prerequisite: CHEM 1123 and CHEM 1121L. (Same as CHEM 3613H)

CHEM4831H Biochemistry II (Fa) The first of a two-course series covering biochemistry for undergraduates. Students in biology, agriculture, and chemistry. Topics covered include structure and function of enzymes, enzyme kinetics, enzyme mechanisms, and carbohydrate metabolism.

Prerequisite: CHEM 3712L and CHEM 3713 (or CHEM 3613) and Lab component. Prerequisite: CHEM 3611L (or CHEM 3713 and CHEM 3712L) and CHEM 3504 and CHEM 3514 (Same as CHEM 3614L)

CHEM5753 Physical Methods in Organic Chemistry (Sp) Introduction to the application of synthetic and spectroscopic methods in organic and inorganic chemistry, including spectroscopy, nuclear magnetic resonance, ultraviolet-visible, and infrared spectroscopy. Other laboratory techniques applicable to chemical research will be included. Lecture 1 hour, laboratory 6 hours per week. Chemistry 3712L not graduate credit for this course and CHEM 5753.

CHEM5233 Chemical Separations (Even years, Fa) Modern separation methods including liquid chromatography (adsorption, liquid-liquid partition, ion exchange, exclusion, and gas chromatography). Appropriate instrumentalization is discussed with emphasis on practical aspects of separation science. Prerequisite: CHEM 4213.

CHEM5253 Spectrochemical Methods of Analysis (Odd years, Fa) Principles and methods of modern spectroscopic analysis. Optics and instrumentation emphasizing molecular spectroscopy on organic compounds and biochemistry. May be repeated for 6 hours.

CHEM5803 Theoretical Organic Chemistry (Fa) Application of theoretical interpretation of reactivity, reaction mechanisms, and molecular structure of organic compounds. Application of theories of electronic structure; quantum mechanics, and spectroscopy. Prerequisite: CHEM 3514 and CHEM 3713 and CHEM 3712L.

CHEM5853 Chemical Kinetics (Sp) Theory and applications of the principles of kinetics to reactions between substances, both in the gaseous state and in solution. Prerequisite: CHEM 3514.

CHEM5853 Biochemical Evolution (Even years, Sp) Abiotic synthesis of biomolecules on Earth, the origin of cells, genetic information, origin of life on Earth and elsewhere, evolution and diversity, ecological niches, bacteria, archaea, eukaryotes, novel metabolic reshaping of the environment, life being reshaped by the environment, molecular data and evolution. Prerequisite: CHEM 5813.

CHEM5853 Theoretical Organic Chemistry (Fa) Introduction to the theoretical interpretation of reactivity, reaction mechanisms, and molecular structure of organic compounds. Application of theories of electronic structure; quantum mechanics, and spectroscopy. Prerequisite: CHEM 3514 and CHEM 3713 and CHEM 3712L.

CHEM5853 Organic Reactions (Fa) The more important types of organic reactions and their applications to various classes of compounds. Prerequisite: CHEM 3514 and CHEM 3713 and CHEM 3712L.

CHEM5853 Physical Methods in Organic Chemistry (Fa) Interpretation of physical measurements using organic compounds in terms of molecular structure and properties. Emphasis on spectroscopic methods (infrared, ultraviolet, magnetic resonance, and mass spectra). Prerequisite: CHEM 3712L and CHEM 3713 and CHEM 3514.

CHEM5853 Biochemistry I (Sp) The first of a two-course series covering biochemistry for graduate students in biology, agriculture, and chemistry. Topics covered include protein structure and function, enzyme kinetics, enzyme mechanisms, and carbohydrate metabolism. Prerequisite:
CHEM 3712L and CHEM 3713 (or CHEM 3613 and CHEM 3611L) and CHEM 3514 (or CHEM 3453 and CHEM 3451L). (Same as CHEM 4834H).

CHEM 5843 Biochemistry II (Sp) A continuation of CHEM 5813 covering topics including biological membranes and bioenergetics, photophysics, lipids and lipid metabolism, nucleic acid structure, synthesis, and molecular biology. Prerequisite: CHEM 5813. (Same as CHEM 4843H).

CHEM 600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing. CHEM 6011 Chemistry Seminar (Sp, Fa) Members of the faculty, graduate and advanced students meet weekly for discussion of current chemical research. Weekly seminar sections are offered in the Department (graduate seminar) and for divisional seminars in biochemistry and in analytical, inorganic, organic, and physical chemistry. Chemistry graduate students register for the Departmental seminar section and one of the divisional seminar sections each semester they are in residence. Seminar credit does not count toward the minimum hourly requirements for any chemistry graduate degree. Prerequisite: CHEM 3514 and CHEM 3712L and CHEM 3713 and senior or graduate standing. May be repeated for 1 hour.

CHEM 619V Special Topics in Inorganic Chemistry (Irregular) (1-3) Topics which have been presented in the past include: electroanalytical techniques, kinetic theory of x-ray diffraction, electronic structure of transition metal complexes, inorganic reaction mechanisms, and physical methods in inorganic chemistry. May be repeated for a total of 9 hours.

CHEM 629V Special Topics in Analytical Chemistry (Irregular) (1-3) Topics which have been presented in the past include: electroanalytical techniques, kinetical theory of x-ray diffraction, electronic structure of transition metal complexes, inorganic reaction mechanisms, and physical methods in inorganic chemistry. May be repeated for a total of 9 hours.

CHEM 6683 Bioenergetics and BioMEMBRANES (Even years, Sp) Cellular energy metabolism, photophysics, membrane transport, properties of membrane proteins, and the application of thermodynamics to biological systems. Prerequisite: CHEM 5813 and CHEM 5843.

CHEM 700V Doctoral Dissertation (Sp, Su, Fa) (1-6) Prerequisite: graduate standing. May be repeated for 6 hours.

Chinese (CHIN)

CHIN 1003 Elementary Chinese I (Fa) CHIN 1013 Elementary Chinese II (Sp) Elementary courses stress correct pronunciation, Aural comprehension, and simple speaking ability, and lead to mastery of basic grammar and limited reading ability. Prerequisite: CHIN 1003 or equivalent.

CHIN 2003 Intermediate Chinese I (Fa) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: CHIN 1013 or equivalent.

CHIN 2013 Intermediate Chinese II (Sp) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: CHIN 2003 or equivalent.

CHIN 2033 Advanced Chinese (Fa) Continues to develop speaking, listening, reading, writing skills and presents more complex forms and structures of the language as well as additional characters. Prerequisite: CHIN 2013 or equivalent.

CHIN 3033 Conversation (Irregular) Guided conversation practice for the intermediate student. Prerequisite: CHIN 2013 or equivalent.

CHIN 3103 Chinese Culture and Film (Sp) A course based on film and readings designed to give insight into Chinese civilization and culture with special emphasis on ethnicity, modern history, contemporary society, education, language, customs, and visual arts. This course is taught in English. May be repeated for 6 hours.

CHIN 3983 Special Studies (Irregular) May be offered in subject not specifically covered by courses otherwise listed. May be repeated for 6 hours.

Curriculum and Instruction (CIED)

CIED 3003 Developmental Reading (Sp, Su, Fa) A structured individualized laboratory course in the improvement of reading skills. For students not meeting U of A admissions reading placement standards. University credit given; does not count towards graduation.

CIED 3002 Instruction and Education (Sp, Su, Fa) Integrates psychological, sociological, and philosophical foundations of education with concurrent involvement in field experiences. Encourages prospective teachers to become reflective practitioners, and the organization of school systems, planning and implementation of effective classroom environments, development of teaching styles, and new directions in education. Corequisite: CIED 1011.

CIED 3011 Introduction to Education: Practicum (Sp, Su, Fa) A 30-hour field experience designed to give prospective teachers opportunities to observe and participate in a variety of school settings. Includes a variety of field-based activities to encourage personal reflection. Special focus upon organization of school systems, effective classroom environments, teaching styles and new directions in education. Corequisite: CIED 1011.

CIED 3001 Early Childhood Education Practicum (Sp, Su, Fa) This practicum course provides opportunities for students to observe and practice providing instruction and guidance in preschool settings. Corequisite: CIED 3003.

CIED 3003 Early Childhood Education (Sp, Su) The study of kindergarten and preschool programs: social context of early childhood education, purposes, research basis, curriculum development, methods, and materials.

CIED 3023 Survey of Exceptionalities (Sp, Su, Fa) A survey of the characteristics of students with exceptional needs. Reviews the definitions of exceptionalities, learning and behavior characteristics associated with exceptionalities and the legal basis for the education of persons with exceptionalities in both elementary and secondary schools. Prerequisite: CIED 1002 and CIED 1011; or MUED 1202.

CIED 3003 Classroom Learning Theory (Sp, Su, Fa) A survey of the major theories of learning with special emphasis on human learning and implications for education. Prerequisite: CIED 1002 and CIED 1011; or MUED 1202; and PSYC 3093.

CIED 3043 Introduction to Middle Level Principles and Methods (Fa) A comprehensive overview of the key components, principles, methodologies, and research foundations of middle level education. Field-based study and site-based field experience are integrated with course content to provide continuity between theory and practice. Portfolio expectations will be a primary means of course evaluation. Prerequisite: CIED 3052. (Same as PSYC 3043)

CIED 3053 The Emerging Adolescent (Sp) This course is a study of the developmental characteristics (social, emotional, physical, moral, and intellectual) of early adolescents (ages 10-15) years. Focus will be on changes for motivation, instruction, learning, and classroom management in the classroom. Course has field component. Prerequisite or Corequisite: CIED 3033.

Prerequisite: CIED 1001 and CIED 1002 and PSYC 3003.

CIED 3063H Honors Literacy Strategies for Middle Level Learners (Sp) This course is designed to examine theories and practice regarding literacy development and assessment grounded in the knowledge of the characteristics of the middle level learner. A ten-hour field experience is required. Corequisite: CIED 3072 and honors candidacy. Prerequisite: CIED 3043.

CIED 3063 Literacy Strategies for Middle Level Learners (Sp) This course is designed to examine theories and practice regarding literacy development and assessment grounded in the knowledge of the characteristics of the middle level learner. A ten-hour field experience is required. Corequisite: CIED 3072. Prerequisite: CIED 3043.

CIED 3073H Early Adolescent Literature (Sp) A study of rationales and strategies for incorporating early adolescent literature across the middle level curriculum. Includes an examination of genres and selected texts from each. Corequisite: CIED 3063. Prerequisite: CIED 3052.

CIED 3103H Honors Children's Literature (Sp) A survey of children's literary works, authors, and illustrators with emphasis on the preschool and primary grade literature. Corequisite: CIED 3113. Prerequisite: PSYC 3093.

CIED 3103 Children’s Literature (Sp) A survey of children’s literary works, authors, and illustrators with emphasis on the preschool and primary grade literature. Corequisite: CIED 3113. Prerequisite: PSYC 3093. (Same as CIED 3103)

CIED 3113H Honors Emergent and Developmental Literacy (Sp) This course focuses on theories of children’s emerging literacy and on the continuing development of literacy abilities in pre-kindergarten and early elementary years. Corequisite: CIED 3103. Prerequisite: PSYC 3033 or PSYC 3093.

CIED 3113 Emergent and Developmental Literacy (Fa) This course focuses on theories of children’s emerging literacy and on the continuing development of literacy abilities in pre-kindergarten and early elementary years. Corequisite: CIED 3103. Prerequisite: PSYC 3033 or PSYC 3093. (Same as CIED 3113. R0113 4343)

CIED 3123 Mathematics Methods (Sp, Su) An examination of the content of elementary mathematics courses. Special emphasis given to methods of teaching the content as well as enrichment materials. CIED 3133 Integrated Social Studies (Sp, Fa) Focuses on the methodology of teaching an integrated elementary children's development in language arts and social studies. Integrates the curriculum and teaching strategies in language arts and social studies.

CIED 3134 Teaching Science (Sp, Fa) Study of the methods and materials in teaching science. Classroom applications of teaching strategies with analysis of teacher effectiveness in seminar settings are emphasized. CIED 3135 Language Acquisition and the Developing Educator (Sp, Fa) Introduction to program, direction and methodology of early childhood education. Course is designed to examine theories and practice regarding literacy development and assessment grounded in the knowledge of the characteristics of the middle level learner. A ten-hour field experience is required. Corequisite: CIED 3063. Prerequisite: CIED 1001 and CIED 1011; or MUED 1202; and PSYC 3093.

CIED 3003 Developmental Reading (Sp, Su, Fa) A structured individualized laboratory course in the improvement of reading skills. For students not meeting U of A admissions reading placement standards. University credit given; does not count towards graduation.

CIED 3002 Instruction and Education (Sp, Su, Fa) Integrates psychological, sociological, and philosophical foundations of education with concurrent involvement in field experiences. Encourages prospective teachers to become reflective practitioners, and the organization of school systems, planning and implementation of effective classroom environments, development of teaching styles, and new directions in education. Corequisite: CIED 1011.

CIED 3011 Introduction to Education: Practicum (Sp, Su, Fa) A 30-hour field experience designed to give prospective teachers opportunities to observe and participate in a variety of school settings. Includes a variety of field-based activities to encourage personal reflection. Special focus upon organization of school systems, effective classroom environments, teaching styles and new directions in education. Corequisite: CIED 1002. (Same as CIED 1001P).

CIED 3001 Early Childhood Education Practicum (Sp, Su, Fa) This practicum course provides opportunities for students to observe and practice providing instruction and guidance in preschool settings. Corequisite: CIED 3003.

CIED 3003 Early Childhood Education (Sp, Su) The study of kindergarten and preschool programs: social context of early childhood education, purposes, research basis, curriculum development, methods, and materials.

CIED 3023 Survey of Exceptionalities (Sp, Su, Fa) A survey of the characteristics of students with exceptional needs. Reviews the definitions of exceptionalities, learning and behavior characteristics associated with exceptionalities and the legal basis for the education of persons with exceptionalities in both elementary and secondary schools. Prerequisite: CIED 1002 and CIED 1011; or MUED 1202.

CIED 3003 Classroom Learning Theory (Sp, Su, Fa) A survey of the major theories of learning with special emphasis on human learning and implications for education. Prerequisite: CIED 1002 and CIED 1011; or MUED 1202; and PSYC 3093.
is designed to synthesize the foundational content presented in the Bachelor of Science in Education, Elementary Education program, on refinement of generalized knowledge to accommodate specialized content relevant to young children.

CIED4023 Teaching in Inclusive Secondary Setting (Su) This course is designed to prepare preservice teachers to teach in inclusive classroom settings at the secondary level. Course content will focus on the ways in which exceptionally, specifically focused on high-incidence disabilities, and specific disabilities are specifically focused on English language learners mediate the learning experiences of secondary level students.

CIED4101 Practicum (Sp) Practicum. Corequisite: CIED 4131 and CIED 4132.

CIED4113 Integrated Communication Skills (Sp) Focuses on the methodology of facilitating pre-kindergarten, kindergarten, and early elementary children's literacy development. Emphasis is on the integration of the communication skills of reading, writing, speaking, and listening across the curriculum. Corequisite: CIED 4128 and CIED 4129.

CIED4128 Content Integration (Sp) Integrates the curriculum and teaching strategies of mathematics, science, and social studies in childhood education. Students are required to develop a professional portfolio and participate in specific research projects. Prerequisite: completion of CIED 4101 and CIED 4113.

CIED4131 Practicum in Secondary Education (Sp, Su, Fa) This practicum is a requirement for entry into the Secondary Master of Arts (M.A.T.) in teaching program. Students will be involved in documented experiences with children for a minimum of 60 hours with at least 20 of them being with grades 7 through 12.

CIED4133 Introduction to Aural Rehabilitation (Sp) Study of the technique used in the rehabilitation of speech and language problems of the hearing impaired including the role of assessment, auditory training, and speech leading in rehabilitation. Prerequisite: CIDS 3103.

CIED4133 Measurement, Research, and Readings (Sp, Su, Fa) This course is designed to provide an introduction to educational assessment, research methods, and what teachers need to know about trends and topics in elementary education.

CIED4143 Curriculum Design (Su) A course in the design and adaptation of curriculum for students in regular, elementary classrooms. Theoretical bases and curriculum models will be reviewed.

CIED4153 Classroom Management (Sp, Fa) This course focuses on a number of different management techniques for Pre-K through upper elementary grades that can be used in general education settings.

CIED4163 Senior Project (Sp, Fa) This course is designed to provide opportunity for the research skills necessary to complete their senior project.

CIED4173 Student Teaching (Sp, Fa) This course is a field-based practicum experience.

CIED4181 Seminar in Professionalism (Sp) Examines the legal, ethical, and moral aspects of teaching and involvement in professional organizations. Students participate in field experiences, simulations, and discussions. Corequisite: CIED 4210 and CIED 4211 and CIED 4221.

CIED4210 Practicum: Critical and Creative Thinking Skills (Sp, Su, Fa) Practicum in which students apply theory to practice. Emphasis is on actual application of theory to their own creative and critical thinking skills, methods for transferring the knowledge of theory to classroom application in their curricular area(s), and curriculum development. Corequisites: CIED 4201 and CIED 4221.

CIED4211 Seminar: Critical and Creative Thinking Skills (Sp, Su, Fa) Provides a basic understanding of how to incorporate creative thinking skills across the curriculum. Quality of instruction is introduced to a variety of strategies as well as site-based field experiences which provide continuity between theory and practice. Corequisite: CIED 4201 and CIED 4210 and CIED 4221.

CIED4212 Seminar in the Structure of the Disciplines (Sp, Su, Fa) An analysis of the cognitive properties and organizations possible for subject disciplines. Looks at ways to discover understanding of a discipline and how to teach students to discover understanding. Corequisites: CIED 4201 and CIED 4210 and CIED 4221.

CIED4323 Instructional Design for Teachers (Sp, Su, Fa) Study of the design of instruction for students with exceptionalities. Emphasis is placed on synthesizing a broad range of existing and emerging perspectives and methods of instruction and applying them to practical classroom practice. Prerequisites: CIED 3023 and CIED 3033 and (CIED 3313 or CIED 3323).

CIED4343 Teaching Reading (Sp) Focuses on teaching developmental and content area reading in the middle school setting. Students are introduced to the process of teaching reading across the curriculum, with a focus on the integration of the sciences, technology, and social studies in middle school curriculum. Prerequisites: CIED 3103 and CIED 3113.

CIED5003 Childhood Seminar (Sp) This course is designed to synthesize the foundational content presented in the Master of Arts in Teaching core courses. It focuses on refinement of the generalized knowledge to accommodate specialized content children. Professional attitudes, knowledge and skills are emphasized. Prerequisites: admission to the M.A.T. program.

CIED5012 Measurement, Research, and Statistical Concepts for Teachers (Su) An introduction to constructing, analyzing, and interpreting tests, types of research and the research process; qualitative and quantitative techniques for assessment; and descriptive and inferential statistics.

CIED5013 Measurement, Research, and Statistical Concepts in the Schools (Su) An introduction to constructing, analyzing, and interpreting tests, types of research and the research process; qualitative and quantitative techniques for assessment; and descriptive and inferential statistics. Prerequisite: Admission to Graduate School. May be repeated.

CIED5022 Classroom Management Concepts (Fa) A number of different classroom management techniques are studied. It is assumed that a teacher must possess a wide range of knowledge and skills to be an effective classroom manager. Prerequisite: admission to the M.A.T. program.

CIED5032 Curriculum Design Concepts for Teachers (Sp) The design and adaptation of curriculum for students in regular and special classrooms. Theoretical bases and curriculum models are reviewed. Concurrent clinical experiences for RDNG 5123 (Literacy Assessment) and RDNG 5124 (Reading and Writing Across the Curriculum) may be scheduled. Prerequisite: admission to the M.A.T. program.

CIED5042 Reading and Writing Across the Curriculum (Su, Fa) This course teaches the integration of reading and writing in the content areas. Reading and writing as integrated strands of the language process is presented in the context of instructional principles and suggested teaching practices. A solid research base is emphasized while keeping the focus on practical application. Prerequisites: admission to the M.A.T. program.

CIED5052 Seminar: Multicultural Issues (Su) This seminar provides an introduction to the major concepts and issues related to multicultural education. The ways in which race, ethnicity, gender, and exceptionality influence students' behavior are discussed. Prerequisite: admission to the M.A.T. program.

CIED5053 Multicultural Issues in Elementary Education (Sp) Emphasis is on analysis of cutting edge issues germane to the life, education, and welfare of the early adolescent via the integration of theory and practice. Prerequisite: admission to the M.A.T. program.

CIED5113 Reading Across the Middle Level (Sp, Su, Fa) An overview of methods and materials for teaching reading to early adolescents. Reflective activities and site-based field experiences are integrated with course content to provide continuity between theory and practice. Portfolio expectations will be a primary means of course evaluation. Prerequisite: admission to the middle level education program (CIED 3113).

CIED5123 Writing Process Across the Curriculum (Middle Level) (Sp) This course will provide an overview of the research, and methods for incorporating writing across all curriculum. Writing as a process will be emphasized. Reflective activities and site-based field experience will be integrated into the course content. Prerequisite: admission to M.A.T. Program.

CIED5132 Research in Middle Level Curriculum and Instruction (Fa) An introduction to inquiry and research in middle level curriculum and instruction. It examines the principles, strategies, and techniques of special and especially qualitatively oriented educational research and evaluation is done as part of the class. Prerequisite: admission to the MAT program.

CIED514V Internship: Middle Level (Sp, Su, Fa) The internship for students enrolled in the Bachelor of Science in Education, Elementary Education program who have completed an extended field experience in which a preservice teacher integrates knowledge and skills developed in education classes with practice in the field. Prerequisite: admission to the M.A.T. program.

CIED5150 Middle School Practicum (Sp, Su, Fa) Provides practical experiences in conjunction with specified middle level course. Reflective activities and site-based field experiences are integrated with course content to provide continuity between theory and practice. Portfolio expectations will be a primary means of course evaluation. Prerequisite: enrollment is associated with middle level education courses.

CIED5151 Design and Preparation of Curriculum Materials (Sp, Su, Fa) (Formerly SEED 5153) Prerequisites and procedures for the selection, development, and organization of curriculum materials including learning packages, simulation and games, units, and classroom study or curriculum guides. Prerequisites: EDFD 5373 or equivalent.

CIED5162 Applied Practicum (Fa) Provides laboratory experiences for RDNG 5123 (Literacy Assessment) and RDNG 113 (Reading in Elementary Education). Corequisites: CIED 5183 and CIED 5173. Prerequisite: admission to the M.A.T. program.

CIED5173 Literacy Assessment (Fa) Focuses on assessment of young children's literacy skills. Techniques discussed include informal observation, miscue analysis, and portfolio assessment. Prerequisite: admission to the M.A.T. program.

CIED5183 Readings in Early Childhood Education (Fa) Will continue to develop understandings of classic studies and will explore the impact these have had on the most recent issues in early childhood education. Prerequisite: admission to the CIED M.A.T.

CIED5193 Methods of Instruction for Middle School II (Fa) Second special methods course for teaching at the middle level. Focuses further refinement of teaching methods and techniques through a variety of instructional and practical experiences. Emphasis on learning processes. Prerequisite: admission to the M.A.T. program.

CIED5210 Practicum: Critical and Creative Thinking Skills (Sp, Su, Fa) Practicum in which students apply theory to practice. Emphasis is on actual application of theory to their own creative and critical thinking skills, methods for transferring the knowledge of theory to classroom application in their curricular area(s), and curriculum development. Corequisites: CIED 4201 and CIED 4221.

CIED5223 Issues and Principles of Secondary Education (Su) This course provides an introduction to the Secondary Education M.A.T. program. It provides the student with information about the foundational issues in education, including history and philosophy of American Education, current trends and issues in education, psychological and social theories of education, character education, and learning processes. Prerequisite: admission to M.A.T. degree program.

CIED5232 Interdisciplinary Studies (Sp, Su, Fa) Focuses on the nature of interdisciplinary study; curriculum content, course planning (topics and themes), instructional strategies, and evaluation of content. Prerequisite: admission to the M.A.T. program.

CIED5243 Special Methods of Instruction I (Su)
Evaluation of learning using traditional means of assessment as well as alternative or authentic assessment techniques. 

CIED5467 Development of Instruction (Sp, Su, Fa) Advanced study of research and theory. A thematic and case study approach to child behavior and development which investigates the child’s behavior and needs in the school setting. Emphasis on current research. Prerequisite: PSYC 3093.

CIED5473 Advanced Course in Children’s Literature (Irregular) Compares and contrasts contemporary award-winning books with children’s classics, analyzing elements of style. Focuses on use of rhetorical devices. Prerequisite: CIED 3103 and CIED 5433.

CIED5483 Teaching Mathematics (Irregular) Content, methods, and materials for teaching multiple strands of elementary school mathematics. Emphasis on principles and procedures of a conceptual and integrated approach to learning mathematics. Prerequisite: undergrad coursework in teaching elementary or early childhood mathematics.

CIED5493 Teaching Social Studies (Irregular) Purpose, content, psychology, materials, and methods for teaching the social sciences in the elementary school. Emphasis on principles and procedures for combining the social studies with other areas of the curriculum in broad unit instruction. Prerequisite: Undergraduate coursework in teaching elementary or early childhood social studies.

CIED5503 Teaching Science (Sp, Su, Fa) The influence of science on the community, on the home, and the child. Use of science in the living and learning of the child at school.

CIED5533 Teaching Language Arts (Sp, Su, Fa) The place of the language arts in the elementary curriculum. Exploration of materials, content, practices, and methods, used in reading, speaking, listening, and writing experiences. Prerequisite: CIED 5553 or equivalent.

CIED5553 Correlates of Reading Process (Sp, Fa) A developmental program is emphasized through a study of reading theories and research. Learning theory and research are related to reading instruction and materials through the development and application of evaluative criteria based on an understanding of reading process. Prerequisite: CIED 5573.

CIED5593 Corrective Reading in the Classroom (Sp, Su, Fa) Emphasizes the diagnosis and remediation of reading difficulties in the classroom setting. Students are expected to become familiar with causes of reading difficulties, diagnosis instruments and procedures, principles of report writing, and corrective instructional methods and materials.

The course is open to graduate students with instructor's consent. Emphasis is given to the use of commercially produced materials and trade books in remediation. Enrollment limited to 15. Prerequisite: CIED 5593.

CIED5633 Corrective Reading Practicum (Sp, Su, Fa) Laboratory experience in which students diagnose reading difficulties and practice remedial measures under the direct supervision of the instructor. Emphasis is given to continuous diagnosis and to the use of commercially produced materials and trade books in remediation. Prerequisite: CIED 5593.

CIED5683 Gifted and Talented (Structured) Practicum (Sp) Supervised field experience in gifted education programs, schools, institutions, and other facilities for gifted/talented children. Prerequisite: CIED 5803.

CIED5682 Gifted and Talented (Structured) Practicum (Fa) Students design and implement an individualized practicum experience (Type III Internship) that provides the opportunity to refine and enhance personal attitudes, beliefs, and skills in gifted education. Prerequisite: CIED 5603.

CIED5873 Assessment of Exceptional Students (Fa) Methods and techniques of assessment of children in all areas of exceptionality with emphasis on diagnosis and classification

CIED5873 Gifted and Talented (Structured) Practicum (Sp) Supervised field experience in gifted education programs, schools, institutions, and other facilities for gifted/talented children. Prerequisite: CIED 5813.

CIED5873 Assessment of Exceptional Students (Sp) Methods and techniques of assessment of children in all areas of exceptionality with emphasis on diagnosis and classification

CIED5873 Research in Special Education (Irregular) Review of research in special education including all areas of exceptionality with emphasis on diagnosis and classification

CIED5893 Organization, Administration and Supervision of Special Education (Irregular) Procedures, responsibilities and problems of organization, administration, and supervision of special education programs.
modalities, especially those with exceptional strengths. CIED5913 Professionalization of Teaching (Sp, Su) Focuses on professionalizing the role and responsibility of career professional teachers and con-
comitant implications for school improvement and educational change. Reflection and inquiry processes are integrated with courses that increase understanding of how multicultural, professional growth in science instruction. Prerequisite: Admission to Ed.S. or Ph.D. program.

CIED6923 Second Language Acquisition (Sp) This course is designed to critically examine education and teaching of these in students. Prerequisite: Admission to EdS. or PhD. May be repeated.

CIED693V Individual Diagnosis and Remediation in Reading (Sp, Su, Fa) Specialized techniques and material for diagnosis and remediation of reading disabil-
ities. Ratios and instructional settings are developed through focus on an interdisciplinary approach to diagnosis, program planning, and remediation. Enrollment limited to 20. Advanced graduate students only. Prerequisite: CIED 5593 and CIED 593.

CIED6223 Investigations in Reading (Sp, Su, Fa) Research techniques and findings in reading are extensively reviewed by the student. Student is expected to culminate this course by identifying a research problem in the field of reading for possible further study. Prerequisite: read-
ing certification.

CIED6253 Organization of Reading Programs (Sp, Su, Fa) Study of the problem of organizing the classroom, individual school, and school system, for the improvement of reading instruction. Emphasis is given to the development of program organization rationale based on requirements of the teaching-learning setting.

CIED6313 Issues, History, and Rationale of Science Education (Irregular) This course is the foundation experience for those interested in the discipline of science education. Topics include the philosophical and scientific fundamen-
tal issues in and vocabulary of science education. The course includes the research basis for science teaching, the litera-
ture of science education, and the issues and controversies surrounding teaching and learning science. This course is the second semester world literature requirement.

CIED6323 Science Seminar (Sp, Su, Fa) Focuses on science education, different views of multicultural education, and the impact of multicultural education upon the schooling process. May be repeated for 6 hours.

CIED6423 Philosophical and Sociological Bases of Special Education (Irregular) A study of the basic philosophical and sociological bases for special education practice in special education education. This course is designed to trace, examine, discuss, and promote understanding of issues related to multicultural education, different views of multicultural education, and the impact of multicultural education upon the schooling process. Emphasis is upon schooling experiences of culturally diverse students, language issues, gender issues, and evaluation issues. Prerequisite: admission to the Ph.D. program.

CIED660V Workshop (Sp, Su, Fa) (1-8) May be repeated for 18 hours.

CIED674V Internship (Sp, Su, Fa) (1-6) May be repeated for 6 hours.

CIED694V Special Topics (Sp, Su, Fa) (1-6) Discussion and advanced studies on selected topics in curriculum and instruction. Specific focus on recent develop-
ments. May be repeated for 6 hours.

CIED695V Independent Study (Sp, Su, Fa) (1-6) May be repeated for 6 hours.

CIED699V Doctoral Seminar (Sp, Su,Fa) (1-3) May be repeated for 3 hours.

CIED699V Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

Classical Studies (CLST)

CLST1003H Honors Introduction to Classical Studies: Greece (Sp, Su) (Same as CLST 1003) May be repeated for 3 hours.

CLST1003H Honors Introduction to Classical Studies: Latin (Sp, Su) May be repeated for 3 hours.

CLST1003H Honors Introduction to Classical Studies: Rome (Even years, Sp) A multi-faceted introduction to Roman culture, focusing on the literature, philosophy, history, art and archeology. Source material to be read in English. Lectures liberally illustrated with slides. This course fulfills the second semester world literature requirement.

CLST399VH Honors Course (Irregular) (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

CLST4003H Honors Classical Studies Colloquium (Sp) Prerequisite: junior standing. (Same as CLST 4003) May be repeated for 3 hours.

Criminal Justice (CMJS)

CMJS199TT CMJS TRANSFER COURSE

CMJS2003 Introduction to Criminal Justice (Sp, Fa) Survey of the field of criminal justice, with an emphasis upon law enforcement, the courts, and corrections. (Same as CMJS 2003)

CMJS2053 Critical Thinking and Writing in Criminal Justice (Sp, Fa) An introduction to methods of critical thinking and writing in the legal justice system. Students who have had some previous instruction in science teaching methods and/or had some prior science teaching experi-
ence. Students will gain new or renewed perspectives with respect to their personal teaching ability while engaging in discussions and activities designed to assist others in profes-
sional growth in science instruction. Prerequisite: Admission to Graduate School. Lapse.

CMJS4003 Multicultural Education (Sp, Su, Fa) A study of the nature of Science: Philosophy of Science for Science Educators (Irregular) The Nature of Science is a hybrid arena consisting of aspects of the philosophy, history and sociology of science along with elements of the psychological and scientific observations targeting the complete understanding of how science actually functions. Prerequisite: Admission to Grad School. May be repeated.

CMJS434 Advanced Scientific Teaching Methods (Irregular) This course is designed for those educators who have had some previous instruction in science teaching methods and/or had some prior science teaching experi-
ence. Students will gain new or renewed perspectives with respect to their personal teaching ability while engaging in discussions and activities designed to assist others in profes-
sional growth in science instruction. Prerequisite: Admission to Graduate School. Lapse.

CMJS4603 Emerging Issues in Special Education (Irregular) A study in the complex issues with which profes-
sionals in the field of special education must be familiar and prepared to address.

CMJS461V Special Topics in Special Education (Irregular) (1-6) Discussion and advanced studies on select topics in special education. Specific focus on recent developments. May be repeated for 6 hours.

CMJS4623 Philosophical and Sociological Bases of Special Education (Irregular) A study of the basic philosophical and sociological bases for current practices in special education education. This course is designed to trace, examine, discuss, and promote understanding of issues related to multicultural education, different views of multicultural education, and the impact of multicultural education upon the schooling process. Emphasis is upon schooling experiences of culturally diverse students, language issues, gender issues, and evaluation issues. Prerequisite: admission to the Ph.D. program.

CMJS660V Workshop (Sp, Su, Fa) (1-8) May be repeated for 18 hours.

CMJS674V Internship (Sp, Su, Fa) (1-6) May be repeated for 6 hours.

CMJS694V Special Topics (Sp, Su, Fa) (1-6) Discussion and advanced studies on selected topics in curriculum and instruction. Specific focus on recent develop-
ments. May be repeated for 6 hours.

CMJS695V Independent Study (Sp, Su, Fa) (1-6) May be repeated for 6 hours.

CMJS699V Doctoral Seminar (Sp, Su, Fa) (1-3) May be repeated for 3 hours.

CMJS699V Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

CLST1103H Honors Introduction to Classical Studies: Greece (Odd years, Sp) (Same as CLST 1003) May be repeated for 3 hours.

CLST1103H Honors Introduction to Classical Studies: Rome (Odd years, Sp) May be repeated for 3 hours.

University of Arkansas, Fayetteville
Counselor Education (CNED)

CNED1002 Life Skills Development (Fa) Study and application of interpersonal and leadership skills. Conceptualization of human communication systems. (Formerly CEND 1002) Prerequisite: Freshman standing. Consent of the instructor required. May be repeated for credit.

CNED1011 Seminar (Fa, Sp) "Seminar" Single topic seminar focusing on human communication systems. Prerequisite: Instructor consent required. May be repeated for credit.

CNED1020 Paraprofessional Counseling and Leadership Development (Su, Fa) Supervised practice of counseling activities. Prerequisite: Freshman standing. Instructor consent required. Consent of the instructor required. May be repeated for credit.

CNED2013 Paraprofessional Counseling and Leadership Development (Su, Fa) Study and application of interpersonal and leadership skills. Conceptualization of human communication systems. Prerequisite: Freshman standing. Consent of the instructor required. May be repeated for credit.

CNED3003 The Helping Relationship (Sp, Fa) Development of an understanding of the helping relationship. Topics include establishing a working alliance, problem resolution, and interview data in assisting children, adolescents, and adults in educational, vocational, personal, and social planning. Prerequisite: CNED 5303 and CNED 5323 and CNED 5333. May be repeated for credit.

CNED5403 Case Management and Counseling (Fa) Procedures in case management utilizing both clinical and interview data in assisting children, adolescents, and adults in educational, vocational, personal, and social planning. Prerequisite: CNED 5303 and CNED 5323 and CNED 5333. May be repeated for credit.

CNED5513 Counseling and Human Diversity (Sp) Examination of the counseling process utilizing issues of race, class, and socioeconomic status, and how they impact our clients as individuals and as family and society members. Prerequisite: CNED 5303 and CNED 5323 and CNED 5333. May be repeated for credit.

CNED574V Counseling Internship (Fa, Sp) A 600-clock-hour field placement in an approved setting over a minimum of two consecutive semesters. Prerequisite: Consent of instructor. Consent of the instructor required. May be repeated for credit.

CNED599V Seminar (Irregular) (1-6) May be repeated for credit.

CNED6003 Counseling and Addictions (Sp) A study of behavioral and substance additions, including an overview of differential treatment. Prerequisite: CNED 5323 and CNED 5333 and CNED Doctoral or Masters Standing or Permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6013 Advanced Counseling Theory and Methods (Fa, Even Years) Critical analysis of major theoretical perspectives in counseling, including both group and individual counseling strategies for dealing with affective, cognitive, and behavioral dysfunction. Prerequisite: CNED Doctoral Standing or Faculty consent. Consent of the instructor required. May be repeated for credit.

CNED6023 Foundations of Marriage and Family Counseling Therapy (Sp) Comprehensive exploration of the current theories/techniques of marriage, family, and couples counseling. Prerequisite: CNED 5303 and CNED 5333 and CNED Doctoral or Masters Standing or Permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6033 Advanced Group Theory and Methods (Sp) Comparative study of theories and processes of group counseling. Includes supervised experience in group facilitation with video recording and playback. Prerequisite: CNED 5363 or equivalent and CNED Doctoral Standing or Permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6043 Supervision of Counselors (Fa, Even Years) Analysis, assessment, and practical application of counselor supervision techniques in treatment and training programs. Prerequisite: CNED Doctoral standing and CNED Faculty consent. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED605V Independent Study (Sp, Fa) (1-18) May be repeated for credit.

CNED6053 Counseling and Sexuality (Su, Odd Years) Counseling practice and theory in issues related to sexual dysphoria, sexuality, and sexual problems. Prerequisite: CNED 574 and CNED Doctoral standing or Permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6073 Research in Counseling (Sp, Odd Years) Review and analysis of research in counseling. Prerequisite: CNED Doctoral standing or permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6083 Consultation Theory and Methods (Sp) Strategies, practical application, and techniques for effective consultation with parents, teachers, and community agencies. Prerequisite: CNED 5333 (preferred) CNED Doctoral or Masters Standing or Permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6093 Counseling Children and Adolescents (Sp) Introduction to counseling children and adolescents including the process, theories, techniques, and materials applicable to children and adolescents in a pluralistic society. Prerequisite: CNED 5303 and CNED 5323 and CNED Doctoral or Masters standing or permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6123 Clinical Applications of Marriage and Family Counseling (Sp, Even Year) Advanced clinical methodology appropriate for family counseling, marriage counseling, and couples counseling (in all settings), with emphasis on solution-focused systems, Satir model and process, and other theoretical frameworks. Prerequisite: CNED 5303 and CNED Doctoral or Masters standing or permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6143 Advanced Individual Appraisal (Fa, Odd Years) To provide advanced knowledge and experience with those psychological testing and procedures used in conducting school related assessment. Prerequisite: CNED 5303 and CNED 5413 or equivalent and CNED Doctoral standing or permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED6153 Gender Issues Counseling and Human Development (Su, Even Years) A study of gender and sex role issues pertinent to the counseling profession, and their effect on the development of children, adults, and young and older adults. Students utilize Gender Fair Guidelines for counseling as presented by the American Counseling Association. Prerequisite: CNED 5203 and CNED Doctoral standing or permission. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED674V Internship (Sp, Su, Fa) (1-18) Supervised field placement (Clinical/Instructorship/Supervision). Prerequisite: CNED Doctoral Standing, CNED Faculty consent and CNED Clinical Coordinator Consent. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

CNED699V Seminar (Su, Fa) (1-18) Prerequisite: CNED Doctoral standing or permission. May be repeated for credit.

CNED700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

Communication (COMM)

COMM1003H Honors Basic Course in the Arts: Film Lecture (Sp, Su, Fa) Introduction of film as entertainment and art. How to look at a film through a study of composition, lighting, editing, sound and acting. Lectures and viewing time. (Same as COMM 1003, COMM 10003) Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM1010H Honors Basic Course in the Arts: Film Lecture (Sp, Su, Fa) An introduction to film as entertainment and art. How to look at a film through a study of composition, lighting, editing, sound and acting. Lectures and viewing time. (Same as COMM 1010H, COMM 1003) Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM1313H Honors Fundamentals of Communication (Sp, Su, Fa) Interpersonal and public communication with emphasis in developing both listening and speaking skills. (Same as COMM 1313) Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM2303 Public Speaking (Sp, Su) Continuing study of the invention and adaptation or oral discourse to the needs of listeners. Consideration of the problems of communication in platform presentation. Prerequisite: COMM 1313. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM2323 Interpersonal Communication (Sp, Su) Personal and interpersonal factors affecting communication in everyday life. Emphasis on interpersonal perception, physical environment, semantic choices, and nonverbal cues affecting communication primarily in the context of work, family, and other personal experiences. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM2333 Introduction to Communication Research (Sp, Fa) Introduction to the basic assumptions underlying communication inquiry; resources for and methods of data collection in communication research; and techniques for organization, interpretation, reporting, and evaluation of communication research. Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM2351 Parliamentary Procedure (Sp, Fa) Study and practice of the rules and practices by which self-governing organizations transact business. Prerequisite: Sophomore standing. (Same as COMM 2351) Consent of the instructor required. Consent of the instructor required. May be repeated for credit.

COMM2382 Intercollegiate Forensics (Irregular) Preparation and participation in public debates and other forensic activities. May be repeated a maximum of 6 hours of credit. No more than 6 hours of credit in COMM 2382 and 3282 may be applied toward the departmental requirement. (A maximum of 12 hours in COMM 2382 and 3282 hours of credit).
credit). May be repeated for 6 hours. COMM2813 Introduction to Electronic Media (Fa, Sp, Su) An introduction to the basic principles and techniques of electronic communication, including radio, broadcast and cable television, telephone, computer information systems, and digital media. Emphasis on the historical development, organizational patterns, and cultural functions of the media.

COMM3173 Introduction to Linguistics (Sp) Introduction to language study with stress upon modern linguistic theory and analysis. Data drawn from various languages and linguistic universals as well as phonological, syntactic, and semantic systems of individual languages. Related topics: language history, dialectology, language and its relation to culture and society, and the history of linguistic scholarship. Prerequisite: COM 2382. (Same as ANTH 3173, ENGL 3173, FLAN 3173)

COMM2822 Advanced Forensics (Irregular) A continuation of 2382. May be repeated for a maximum of 6 hours of credit. No more than 6 hours of credit in COMM 2382 and 3282 may be applied to the departmental requirement. (A maximum of 12 hours in COMM 2382 and 3282 may be counted toward the B.A. requirements.) May be repeated for 6 hours.

COMM3303 Small-Group Communication (Sp, Su, Fa) Procedures used in exchanging information, solving problems, determining policies, and resolving differences in communication among small groups. Prerequisite: COMM 1313 and junior standing.

COMM3333 Communication Criticism (Sp, Su, Fa) Basic elements and theoretical perspectives on criticism of public communication. Extensive practice in written analysis of events in public address, film, television, and other mass media.

COMM3343 Contemporary Communication Theory (Fa) The underlying basis of the communication process as it is reflected in the individual, in interpersonal settings, in one-to-many situations, and in the mass media.

COMM3353 Argumentation: Reason in Communication (Sp, Su, Fa) Concepts characterizing rational discourse, with a concern for examining validity and fallacy. Consider traditional and contemporary models for analyzing argument, including an examination of the philosophy of language and the uses of argument in contemporary rhetorical discourse.

COMM3363 Nonverbal Communication (Sp) Creates an understanding of the functions of nonverbal cues operating in human communication processes and develops familiarity with recent research in the field of nonverbal communication.

COMM3383 Persuasion (Fa) Introduction to theories of persuasion, and emphasis on application and effect.

COMM4243 Science Fiction Film (Sp) This class concentrates on how science fiction in various communicational media influences and is, in turn, influenced by broad features of cultural and historical interaction. Prerequisite: 5 hours radio-television-film and junior standing.

COMM5123 Quantitative Research Methods in Communication (Sp) An introductory course in research design and procedures of social scientific research methods in communication science. Prerequisite: 5 hours radio-television-film and junior standing. (Same as COMM 4113)

COMM4793 Directing Forensics (Irregular) Planning, directing, and coaching co-curricular forensics at the high school or college level.

COMM4823 Children and Media (Sp) An in-depth examination of children's use of media and the effects of media content on child and adolescent development. Topics may include violence and sex in media, commercialism, and new media.

COMM4833 Television Writing (Fa) Comprehensive analysis of the techniques and styles of television commercial and dramatic TV plays. Class projects. Prerequisite: 5 hours radio-television-film and junior standing. (Same as COMM 4833I)

COMM4843 Computer-Mediated Communication (Fa) The use of computer-mediated communication by examining its use and effects in interpersonal, work, educational, and societal contexts and in an introduction to the technologies and skills involved in navigating the Internet. The course focuses on the social aspects of computer-mediated communication, rather than specific software or hardware technologies.

COMM4853 Telecommunication Policy (Sp) Research and discussion of social, ethical, educational, cultural, and technological aspects of telecommunications with attention given to changing programming patterns, world systems of broadcasting, data transmission, emerging technologies, channel policies, and national and international policies. Prerequisite: Junior or senior or graduate standing.

COMM4863 Seminar in Television (Sp, Fa) Research and discussion of contemporary problems in television. Emphasis on the economic and social impact of commercials, news, censorship, children's programs, blacks and women on television, and future developments in telecommunications.

COMM4883 Television and American Culture (Sp) Historical and critical study of how television shapes American culture and is shaped by it. Attention will be given to the study of television history, programs and audiences; particularly how race and gender shape content and reception of contemporary programs. Prerequisite: Junior standing. (Same as COMM 3473)

COMM490V Special Problems (Sp, Fa) (1-6) Credit arranged. Prerequisite: advanced standing. May be repeated for 6 hours.

COMM4913 Internship in Communication (Sp, Su, Fa) Internship in applied communication within public and private organizations. Prerequisite: Junior standing and completion of 18 hours in communication courses. May be repeated for 6 hours.

COMM5111 Colloquium in Communication (Sp, Fa) Presentation of papers on selected topics and discussion of research proposals or on-going research projects. Graduate students are required to register for this course each semester of residence. May be repeated.

COMM5113 Historical and Legal Methods in Communication (Fa) Emphasizes the assumptions and procedures of historical and legal research methods in communication. May be repeated for 3 hours.

COMM5123 Quantitative Research Methods in Communication (Fa) Emphasizes the assumptions and procedures of social scientific research methods in communication.

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Course Descriptions

COM5143 Ethnographic Methods in Communication (Sp) A seminar in ethnography and fieldwork techniques focusing upon the fieldwork procedures and narrative writing strategies that comprise the methods of ethnographic research in communication. Students conduct fieldwork requiring in-depth interpersonal contact with members of a group or culture and practice narrative writing skills.

COM5193 Seminar in Communication (Sp, Su, Fa) Research, discussion, and papers focus on one of a variety of communication topics including symbolic processes in communication, philosophy of rhetoric, communication education, criticism of contemporary communication, interpersonal communication, organizational communication, and contemporary applications of rhetoric. Maximum credit is 9 semester hours. Prerequisite: graduate standing. May be repeated for 3 hours.

COM519V Seminar in Communication (Sp, Su, Fa) Research, discussion, and papers focus on one of a variety of communication topics including symbolic processes in communication, philosophy of rhetoric, communication education, criticism of contemporary communication, interpersonal communication, organizational communication, and contemporary applications of rhetoric. Maximum credit is 9 semester hours. Prerequisite: graduate standing. May be repeated for 3 hours.

COM5203 Communication Theory in Classical Rhetoric (Sp) Systematic investigation of the development of rhetorical theory in the Classical world with emphasis upon the contributions of Plato, Aristotle, Socrates, Cicero and Quintilian. Given some attention to the chief treatises of the medieval period. Lectures, oral, and written reports, including a major research essay. Prerequisite: graduate standing.

COM5233 Seminar in Persuasion (Fa) Focus is on cogent and persuasive argumentation as the basis for development of communication theory. Research evidence concerning the effects of various factors on persuasion.

COM5333 Communication Theory (Sp) Survey of the theoretical foundations of communication theory with primary focus on conceptual, theoretical, and philosophical issues.

COM5343 Interpersonal Communication (Fa) Theory and research concerning the exchange of information and the mutual influencing of behavior among people. Prerequisite: graduate standing.

COM5353 Rhetorical Criticism (Sp) A seminar in rhetoric, a study of the development standards of rhetorical appraisal from the foundations of the art of speaking to the modern period; examination of contemporary approaches to rhetorical appraisal and practice in critical analysis of contemporary address.

COM5363 Seminar in Small Group Communication (Su) A consideration of recent developments in small group research which relate to problem-solving, decision-making, and other kinds of human interaction through speech communication. Emphasis given to the interpersonal speech transaction and to the emergence of communication through speech communication. Emphasis is upon the production and circulation of meanings with society, and special attention is given to the role of popular and mass media in this process. Prerequisite: graduate standing.

COM5353 Family Communication (Even years, Fa) An exploration of the major theories and lines of research that examine family communication in contemporary American life.

COM566V Seminar in Film Studies (Irregular) (1-3) Research, discussion, and papers on a variety of film genres and films that examine the role of communication in everyday life in America.

COM5643 Seminar in Persuasion (Sp) Surveys the major theories and lines of research that examine how race and gender influence interpersonal communication in everyday life in America.

COM5453 Myth and Communication Criticism (Sp) Seminar in major theories of mythology, including archetypal and ideological perspectives, and their applications to the criticism of public communicative events. Practice in written critical analysis. Prerequisite: graduate standing. Prerequisite: graduate standing. Prerequisite: graduate standing.

COM5503 Communication and Cultural Studies (Fa) Examinations of the role of communication in modern culture. Emphasis is upon the production and circulation of meanings with society, and special attention is given to the role of popular and mass media in this process. Prerequisite: graduate standing.

COM5553 Seminar in Communication Theory (Sp) A seminar in communication theory. Emphasis is on comparing theoretical accounts of persuasion and participant roles. Prerequisite: COMM 3303 or SOCI 4193.

COM5443 Issues of Race and Gender in Interpersonal Communication (Odd years, Sp) An exploration of the major theories and lines of research that examine how race and gender influence interpersonal communication in everyday life in America.

COM5323 Seminar in Persuasion (Sp) Seminar in major theories of rhetoric, including archetypal and ideological perspectives, and their applications to the criticism of public communicative events. Practice in written critical analysis. Prerequisite: graduate standing. Prerequisite: graduate standing. Prerequisite: graduate standing.

COM5590V Special Problems (Sp, Su, Fa) (1-6) Credit by arrangement. Prerequisite: graduate standing. May be repeated.

COM5913 Internship in Communication (Sp, Su, Fa) Supervised internship in communication through public and private organizations. Prerequisite: 15 hours graduate level communication in residence.

COM5993 Readings In Cultural Studies (Irregular) Classic and current theoretical approaches to cultural studies. Emphasis given to issues depending on student interest and faculty expertise.

COM600V Master’s Thesis (Sp, Fa) (1-6) Prerequisite: graduate standing.

COM6103 College Computing Skills (Irregular) Introduction to the computer; basic computing skills including operating systems, word processing, spreadsheet and database management applications; Internet applications including electronic mail, remote computing via Telnet, file transfer via ftp, Wide Web navigation and publication. No prior computing skill is necessary.

COM6111L Programming Foundations I Lab (Fa) Laboratory experiences to accompany CSCE 1113. Corequisite: CSCE 1113.

COM6113 Programming Fundamentals I (Sp, Fa) Introductory course for students majoring in computer science or computer engineering. Topics include data representation, high-level languages, looping, functions, pointers and introduction to UNIX operating system. Corequisite: CSCE 1111L.

COM6112M Honors Programming Foundations II Laboratory (Sp) Laboratory experiences appropriate to CSCE 1123H Corequisite: CSCE 1123H.

COM6122L Programming Foundations II Lab (Sp) Laboratory experiences appropriate to CSCE 1123. Corequisite: CSCE 1123 (Same as CENG 1123L). COM6123H Honors Programming Foundations II (Sp) Introduction to programming. Topics include problem analysis and specification, design and test of programming solutions, tools, decomposition, abstraction, iteration and recursion, program I/O and files. Credit will be allowed for only one of CSCE 1023 and CSCE 1123. Corequisite: CSCE 1131L. (Same as CENG 1113L).

COM6122 Programming Foundation II (Sp) Specification and implementation of computations. Fundamental topics: problem solving and analysis techniques, procedure and data, fundamental data types, operators, control structures, arrays, iteration and recursion, basic sorting and searching, an introduction to object oriented programming. Prerequisite: CENG 1113.

CSCE1013 College Computing Skills (Irregular) Introduction to the computer; basic computing skills including operating systems, word processing, spreadsheet and database management applications; Internet applications including electronic mail, remote computing via Telnet, file transfer via ftp, Wide Web navigation and publication. No prior computing skill is necessary.

CSCE1113 Programming Foundations I (Sp) Laboratory experiences to accompany CSCE 1113. Corequisite: CSCE 1113.

CSCE1111L Programming Foundations I Lab (Fa) Laboratory experiences to accompany CSCE 1113. Corequisite: CSCE 1113.

CSCE1121L Honors Programming Foundations II Laboratory (Sp) Laboratory experiences appropriate to CSCE 1123H Corequisite: CSCE 1123H.

CSCE1122L Programming Foundations II Lab (Sp) Laboratory experiences appropriate to CSCE 1123. Corequisite: CSCE 1123 (Same as CENG 1123L). COM6123H Honors Programming Foundations II (Sp) Introduction to programming. Topics include problem analysis and specification, design and test of programming solutions, tools, decomposition, abstraction, iteration and recursion, program I/O and files. Credit will be allowed for only one of CSCE 1023 and CSCE 1123. Corequisite: CSCE 1131L. (Same as CENG 1113L). COM6122 Programming Foundation II (Sp) Specification and implementation of computations. Fundamental topics: problem solving and analysis techniques, procedure and data, fundamental data types, operators, control structures, arrays, iteration and recursion, basic sorting and searching, an introduction to object oriented programming. Prerequisite: CENG 1113.

CSCE2431 Internet Programming (Sp) HTML authoring to W3C standards, use of environment and SSI variables, programming concepts with both scripting languages and interpreted and compiled computer languages. Introduction to web documents, applications, advanced form applications, search/index utilities, and Web databases. Course provides some introduction to scripting or programming. Prerequisite: CSCE 1013.

CSCE3513 Software Engineering (Sp, Fa) A modern approach to the current techniques used in software design and development. This course emphasizes the use of modern software development tools, structured programming, and team design and engineering. Prerequisite: CSCE 2143 or CENG 2143 (Same as CENG 4513).

CSCE3613 Operating Systems (Sp, Fa) An introduction to operating systems including topics in system structures, process management, storage management, files, distributed systems, and case studies. Prerequisite: CENG 2515 or CSCE 2515. (Same as CSCE 4413, ELEG 4913).

CSCE3993 Topics In Computer Science (Irregular) (1-6) Topics not offered in depth in other computer science courses. Prerequisite: junior standing. May be repeated for 99 hours.

CSCE4253 Concurrent Computing (Irregular) Programming concurrent processes; computer interconnection network topologies; loosely coupled and tightly coupled parallel computer architectures; designing algorithms for concurrency; distributed computer architectures. Prerequisite: senior standing in computer science or engineering.

CSCE4313 Introduction to Programming Languages (Irregular) Comparison of imperative, object-oriented, functional and logic styles of programming languages, language extensibility, design of language interpreters, lexical analysis, grammars/parsers, and evaluation strategies. Prerequisite: CSCE 2143 or CENG 2515.

CSCE4323 Introduction to Formal Languages and Computability (Sp) Finite Automata and regular languages, regular expressions, context-free languages and pushdown automata, nondeterminism, grammars, and Turing machines. Church’s thesis, halting problem, and decidability. Prerequisite: CSCE 3313.

CSCE4523 Database Management Systems (Sp) Introduction to database management systems, architecture, storage structures, indexing, relational data model, E-R diagrams, query languages, SQL, ODBD, transaction management, integrity, and security. Prerequisite: CSCE 2143 or CENG 2515.

CSCE4533 Software Design Patterns (Irregular) A study of object-oriented design patterns, their general applications in software design, and their particular application in framework design. Reusable behavioral, creationl, and structural design patterns. Prerequisite: CSCE 1123 or CENG 1123 and CSCE 3313.

CSCE4543 Software Architecture (Irregular) A study of software architecture. Course draws studies drawn from real systems designed to solve real problems from technical as well as managerial perspectives. Techniques for designing, building, and evaluating software architectures. Prerequisite: CSCE 2143 or CENG 2515.

CSCE4551 CS Capstone I (Sp, Fa) Computer Science students complete a comprehensive software capstone project during their final year of undergraduate studies. The project is done over 2 semesters in phases: concept,
Computer Descriptions

CSE490V Problem (Irregular) (1-6)
Current research topics, state of the art, or advanced methodology in one of the major computer science areas, programming languages, hardware and operating systems, theoretical aspects of computer science, artificial intelligence, and database design. May be repeated for 99 hours.

CSE4912H Honors Thesis (Sp, Fa) To provide honors students in presenting their theses in non-thesis courses, and theses accomplished to their peers and faculty. Prerequisite: honors standing. May be repeated for 4 hours.

CSE4963 CS Capstone II (Sp, Fa) Computer Science students complete comprehensive software capstone project during their final year of undergraduate studies. The project is done over 2 semesters in phases: formal proposal, implementation, and presentation. The project includes and may require the integration of software and human factor, hardware elements and are developed to software engineering methodologies. Prerequisite: CSCE 4561.

CSE5003 Advanced Programming Languages (Irregular) A practical course of correctness, functional languages, concurrent programming, exception handling, and object oriented programming, denotational semantics. Prerequisite: graduate standing.

CSE5083 Artificial Intelligence of Computer Systems (Irregular) An advanced study of both classical and recent computer hardware and software systems. Prerequisite: graduate standing.

CSE5603 Design and Analysis of Algorithms (Sp) Design of computer algorithms, with primary emphasis on the development of efficient implementation. Prerequisite: graduate standing.

CSE5613 Artificial Intelligence (Irregular) In-depth introduction to AI. Topics include: philosophical foundations, cognition, intelligent agents, AI languages, search, genetic algorithms, first order and modal logic, inference, resolution, knowledge representation, ontologies, problem solving, planning, expert systems, uncertainty, probabilistic reasoning, fuzzy logic, machine learning, natural language processing, machine vision, and robotics. Prerequisite: graduate standing.

CSE5123 Database Management Systems (Fa) In-depth introduction to database management systems. Topics include: architecture, schemas, data sources, file structures, indexing, data models (relational, hierarchical, network, entity relationship, object-oriented), query languages, views, relational algebra, SQL, optimization, user interfaces, ODBC, transaction management, concurrency control, recovery, integrity, security, and commercial trends. Prerequisite: CSCE 2143 or CENG 2143 and graduate standing.

CSE5203 Advanced Database Systems (Sp) Topics include: object databases, distributed databases, XML, query, data warehouses, network as database systems, peer-peer data sharing architectures, data grids, data mining, logic foundations, semantic databases, spatial and temporal databases, and knowledge bases. Prerequisite: CSCE 5123 and graduate standing.

CSE5213 Introduction to Bioinformatics (Irregular) Application of algorithmic techniques to the analysis of biological problems. Topics include an introduction to molecular biology and recombinant DNA technology, biological sequence comparison, and phylogenetics, as well as topics of current interest. Prerequisite: Instruc. approval (ENG 5013). CSE5233 Principles of Compiler Construction (Irregular) Lexical analysis, parsing, symbol table construction, intermediate code generation, run-time simulation. Prerequisite: graduate standing.

CSE5243 Formal Languages (Fa) An advanced continuation of CSCE 4323. Prerequisite: CSCE 4323 and graduate standing.

CSE5263 Computational Complexity (Irregular) Turing machines, recursion theory and computability, complexity measures, NP-completeness, analysis on NP-complete problems, pseudo-polynomial and approximation. Prerequisite: graduate standing.

CSE5283 Graph and Combinatorial Algorithms (Irregular) A study of algorithms for graphs and combinatorial problems with special information security officers, authentication methods, secure system design, and information assurance. Prerequisite: CSCE 4413.

CSE5333 Computer Forensics (Sp) Various methods for the extraction of electronic evidence at a computer crime scene. Specific topics include auditing and investigation of network and host intrusions, computer forensics tools, resources for system administrators, and practical problems. Prerequisite: graduate standing.

CSE5523 Multiagent Systems (IR) Multiagent systems is the study, construction, and application of systems in which several interacting software (or software and human) agents pursue some set of goals or some set of tasks. The course covers agent architectures; multilevel problem-solving and planning, agent interaction, agent search; multileagent learning; reasoning about action, plans, beliefs and knowledge; coordination; cooperation and competition; teamwork; and multileagent decision-making. Application examples are electronic commerce, scheduling, robots, control, information retrieval, manufacturing and logistics.

CSE5713 Multimedia Systems Design (Irregular) Overview of digital multimedia. Programming and implementation for all forms of digitized information (e.g., text, sound, graphics, animation, and process control) in a single computer-based interactive environment. Prerequisite: graduate standing.

CSE5723 Client-Server Computing (Irregular) Advanced Object Oriented methods for designing software systems for network applications. Topics include implementation of distributed object models, remote database connectivity, server-side programming, and reusable components. Prerequisite: CSCE 5743 and graduate standing.

CSE5733 Information Agency (Irregular) Study of software agents and their deployment on the internet: prerequisites to agents - viruses and worms, origins of software agents, delegate vs. representative agents, agency of the Internet and Web, operational guidelines for agents, HTTP, transaction security, MUD agency, intelligent agency, applications of agents: indexes, resource managers, search utilities, and commercial applications. Prerequisite: graduate standing.

CSE5743 Object Oriented Programming for the Internet (Irregular) Object oriented design and programming for the Internet. Applications for the Basics of the Internet, including TCP/IP protocol stack. Introduction to Object Oriented Programming and Object Design with Unified Modeling Language. Sockets application programming interfaces, Graph protocol services. Prerequisite: graduate standing.

CSE590V Advanced Topics in Computer Science (Irregular) (1-3) Topics not covered in depth in other courses. Prerequisite: graduate standing. May be repeated for 3 hours.

CSE5953 Real-Time Systems (Irregular) A study of real-time system design. The development of real-time systems will be examined from the standpoint of academia, government, and industry. Scheduling, operating systems, and the development of real-time systems will be covered. Prerequisite: graduate standing.

CSE610V Master’s Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

CSE620V Research in Computer Science (Sp, Su, Fa) (1-18) Prerequisite: graduate standing.

CSE699V Graduate Seminar (Irregular) (1-6) Concentrated study in selected areas of computer science. Prerequisite: advanced graduate standing. May be repeated for 12 hours.

CSE700V Doctoral Dissertation (Sp, Su) (1-18) May be repeated for 5 hours.

Crops, Soil, and Environmental Science (CSES)

CSES1011 Introduction to Crop, Soil, and Environmental Science (FA) An introduction to the CSES department and majors in Environmental Soil and Water Sciences and Crop Management. Emphasis will be placed on issues and opportunities within these disciplines and orienting students to the state and University of Arkansas. Required of all department majors with less than 24 semester credit hours. Recitation 1 hour 20 minutes per week for the first eight weeks of the semester. Prerequisite: Placement and sophomore standing.

CSES1203 Introduction to Plant Sciences (Sp, Fa) An introduction to basics of agricultural crop plant structure and function. (Fa) 3 hours, (Sp) 2 hours. Corequisite: HORT 1203. CSES2003 Introduction to Weed Science (Sp) Fundamental, practical concepts of weed control and weed biology; equipment and techniques used in modern weed control practices; and basic recommendations and systems for specific agronomic and horticultural crops. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: CSES 2003 or CSES 2103 or HORT 2003.

CSES2012 Introduction to Organic Crop Production (SP) An introduction to the principles of organic agriculture and ecology and the regulations defining organic production and certification. Additional topics include crop rotations for pest management and for increasing soil organic matter, feeding the soil and plant nutrition, soil health, and green manuring, corporate agriculture and genetically modified organisms.

CSES2013 Pest Management (SP) Introduction to basic principles of pest management as they relate to vertebrate animals, insects, plant disease and weeds. Selected pests are studied with emphasis on current management techniques and alternative pest control measures. Prerequisite: CSES 2101, CSES 2102, and CSES 2103.

CSES2101 Crop Science Laboratory (FA) Field and laboratory exercises related to the study of the physical, chemical, and biological properties of soils. Laboratory methods for all crop management and environmental, soil, and water science majors and optional for others. Laboratory 2 hours per week. Prereq: or Corequisite: CSES 2203.

CSES2203 Soil Science (Fa) Origin, classification, and utilization of soils. Laboratory 3 hours, discussion 1 hour per week. Corequisite: Drill component. Prerequisite: CHEM 1103. (Same as ENCS 2203)

CSES3003 Crop, Soil, and Environmental Sciences Colloquium (Fa) This intensive course covering topics in agronomy and environmental, soil, and water science with particular emphasis on spoken communication but also including written communication, group activities, professional problem solving, and information retrieval. A student-oriented class with collaborative participation. Colloquium workshop: 3 hours per week. Prerequisite: Junior or Senior standing only.
CSES3113 Forage Management (Even years, Sp)
Forage crops for pasture, hay, and silage with reference to growth requirements, production, nutritive value, and economical and quality aspects. Lecture 3 hours per week. Prerequisite: CSES 2013 or CSES 2103 or HORT 1203.

CSES3214 Soil Resources and Nutrient Cycles (Sp, Odd years, Fall) A study of the principles of soil and water management with major emphasis on the United States. Lecture 3 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisites: CSES 2203 or CSES 2103 or HORT 1203.

CSES3124 Cotton Production (Even years, Fa)
Principles and techniques associated with production of cotton. Recitation 2 hours per week. Prerequisite: CSES 1203 or CSES 2103 or HORT 1203.

CSES3322 Soybean Production (Odd years, Sp)
An overview of the history and utilization of soybean as well as the physiological and environmental basis for the development of economical soybean production practices. Recitation 2 hours per week. Prerequisite: CSES 1203 or CSES 2103 or HORT 1203.

CSES3332 Rice Production (Odd years, Fa)
A study of the principles and practices involved in rice culture world wide with major emphasis on the United States. Lecture 2 hours per week. Prerequisite: CSES 2103 or CSES 2103 or CSES 2103 or HORT 1203.

CSES335V Soil Profile Description (Fa) (1-2)
Training for soil profile description writing and membership of judging teams. May be repeated for 8 hours.

CSES4013 Advanced Crop Science (Sp)
Fundamentals of crop physiology, crop improvement, seed science, and crop production systems. Recitation 3 hours per week. Prerequisite: CSES 2103.

CSES402V Special Topics (Irregular) (1-3)
Studies of selected topics and environmental sciences not available in other courses. May be repeated for 12 hours.

CSES4043 Environmental Impact and Fate of Pesticides (Fa)
Environmental issues associated with pesticide use, including fate of pesticides in the environment, ecological impact of pesticides, and exposure risks to humans. Course recommended for students who have 12 hours of biological or physical sciences or consent. Lecture 3 hours per week.

CSES4093 Issues in Pest Management (Sp)
Lecture and discussion on local, regional, national and international issues relevant to pest management policy, ethics, environment, society and science (not for graduate credit). Prerequisite: must have completed 60 hours of coursework. (Same as ANSC 4093 and CVEG 4093).

CSES4103 Plant Breeding (Even years, Fa)
Basic principles involved in plant breeding programs to improve crop plants and seed programs. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: ANSC 2123 or BIOL 2323.

CSES4133 Weed Identification, Morphology, and Ecology (Fa)
Study of weeds as economic pests occurring in both agricultural and nonagricultural situations and including poisonous plants and other weed problems. Gross morphological plant family characteristics which aid identification, habitat of growth and distribution, ecology, competition, competition and interference. Lecture 2 hours, laboratory 2 hours a week. Corequisite: Lab component. Prerequisite: CSES 2103 (or HORT 2003).

CSES4143 Principles of Weed Control (Sp)
Advanced concepts and technology used in modern weed control practices and study of the chemistry and specific activity of herbicides in current usage. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: CSES 2103. (Same as CVEG 2611L and CSES 2003).

CSES4224 Soil Fertility (Fa)
Study of the soils' chemical, biological and physical properties, and human modification of these properties, as they influence the uptake and utilization of nutrients by plants. Lecture 3 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisites: CSES 201L and CSES 2203.

CSES4234 Plant Anatomy (Sp)
Advanced training in plant anatomy. Studying the structure, terminology, techniques and functions and association with vascular plant anatomy. Corequisite: Lab component. Prerequisite: BIOL 1613/1611 or BIOL 1543/1541.

CSES4253 Soil Classification and Genesis (Sp)
Lecture and field evaluation of soil properties and their relation to soil genesis and soil classification with emphasis on soils of Arkansas. Recitation 2 hours per week. Corequisite: Lab component. Prerequisite: CSES 2203.

CSES4263 Environmental Soil Science (Sp)
Study of the behavior of pesticides, toxic organic compounds, metals, nutrients, and essential trace elements in the soil/plant/water continuum. Lecture 3 hours per week. Prerequisite: CSES 3214. (Same as ENSC 4263)

CSES462V Internship (Sp, Su, Fa) (1-6)
Supervised practical work experience in agribusiness, environmental technology, real-time and map-based systems, variable-rate machinery, and smart controls. Evaluation: yield mapping, economic analysis. (same as BENG 4623). Corequisite: Lab component. Prerequisite: Consent of instructor.

CSES5001 Weed Science Practicum (Su)
Training for membership on weed team, through participation. Prerequisite: graduate standing.

CSES5013 Crop Physiology (Odd years, Fa)
Understanding and quantitative measurement of physiological processes, plant responses, and environmental parameters in relation to the production of crops. Prerequisite: CSES 4034.

CSES5023 Weed Physiology and Herbicide Resistance in Plants (Odd years, Fa)
The reproduction, growth, and development of weeds and the ecological factors affecting growth management and mechanisms of herbicide resistance, flow of herbicide-resistance genes; and development of herbicide-resistant crops. Corequisite: Lab component. Prerequisite: CSES 4143 and (BENG 4803 or CHEM 5813).

CSES502V Special Problems Research (Sp, Su, Fa) (1-6)
Original investigations on assigned problems in agronomy. Prerequisite: graduate standing.

CSES5053 Advanced Soil Fertility and Plant Nutrition (Even years, Fa)
Study of water uptake, ion absorption, translocation and metabolism in higher plants. Lecture 3 hours per week. Prerequisite: BIOL 4304 and CHEM 2613 and CHEM 2611L.

CSES505V Special Topics (Irregular) (1-4)
Topics not covered in other courses or a more intensive study of specific topics in agronomy. Prerequisite: graduate standing. May be repeated for 99 hours.

CSES5053 Scientific Writing (Fa)
Open to graduate students, especially those in agricultural and life sciences. The course will cover searching the scientific literature, writing theses, proposals, journal articles, and other scientific documents. Emphasis on style and techniques used in scientific publication. Lecture and workshop 3 hours per week. Prerequisite: graduate standing.

CSES5103 Scientific Presentations (Sp)
Experience in procedures required for professional presentation of scientific papers, seminars, posters; and research findings in conferences, and with discussion groups. Instruction in organization of materials, visual aids, and good speaking habits. Lecture 3 hours per week. Prerequisite: graduate standing.

CSES5124 Statistical Analysis and Mathematical Methods in Life Sciences (Odd years, Fa)
Methods of data presentation and mathematical descriptions of research data in the life sciences including graphical presentations, linear regression, growth equations, kinetics, transport equations, and compartmentalization. Analytical, numerical, and statistical approaches to the solution of research problems in life sciences should be emphasized. Lecture 2 hours per week. Corequisite: Lab component. Prerequisite: MATH 2564 and AGST 4023.

CSES5214 Analytical Research Techniques in Agronomy (Even years, Sp)
Preparation and analysis of plant and soil samples utilizing spectrophotometry, isotopes, and chromatographic separation methods. Additionally, measurements are made of photosyntheses, respiration, water relations, light, and temperature in whole plants. Lecture 2 hours, laboratory 4 hours per week. Corequisite: Lab component. Prerequisite: BIOL 4304 and CHEM 2611L.

CSES5224 Soil Physics (Sp)
Physical properties of soils and their relation to other soil properties, growth of plants and transport of water, oxygen, and solutes such as pesticides and plant nutrients. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: CSES 2203 and MATH 1203.

CSES5233 Plant Genetic Engineering (Odd years, Sp)
Tools will be covered in the field of in vitro plant biology, transgene genetics and crop genetic engineering. Concepts and applications of transgenic plant technology will be discussed, with the emphasis on the strategies for crop improvement and gene discovery. Lecture 2 hours, laboratory 4 hours per week. Prerequisite: BIOL 1203 and CHEM 2611L.

CSES5284 Soil Microbiology (Odd years, Sp)
A study of the microorganisms in soil and the biochemical processes for which they are responsible. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: BIOL 2103 and CHEM 2611L.

CSES533V Advanced Hay and Silage Production (Fa)
Advanced study of the principles of good hay and silage production. The course includes a detailed review of forage nutritive value followed by an in-depth discussion of the management of wilting forage crops, silage biochemistry, ensiling characteristics of various forages, silo management, spontaneous heating in hay and silage, dry matter loss, management of stored hay, and factors affecting quality that result from poor conservation of harvested forages. Prerequisites: CSES 3113, ANSC 3152 and ANSC 3151L. (Same as ANSC 5352).

CSES5453 Soil Chemistry (Even years, Sp)
Application of the principles of chemistry to processes of agricultural and environmental importance in soils. Soil clay mineralogy, soil solution thermodynamics, structure and reactivity of humus, surface complexation and ion exchange, electro-chemical phenomena, and colloidal stability. Prerequisite: CSES 2203 and CHEM 1123 and CHEM 1121L.

CSES5543 Plant Genomics (Odd years, Fa)
Plant genomics based on the whole genome sequence, transcriptome and proteome. Provides an overview of the principles and techniques of experimental and in silico genomics. Covers all areas of genome research including structural, comparative and functional genomics as well as proteomics. Prerequisite: CHEM 5843 or any graduate level genetics course.

CSES600V Master’s Thesis (Sp, Su, Fa) (1-6)
Graded research.

CSES6613 Herbicide Behavior (Even years, Fa)
Biochemistry, physiology and behavior of herbicides in plants, soils, and the environment. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: CSES 4143 and BIOL 4304 and CHEM 3813.

CSES6622V Advanced Topics in Soil Science (Irregular) (1-6)
Topics include doctoral-level concepts in soil physics, soil chemistry, and soil microbiology/biochemistry not considered in other soil science courses. Prerequisite: graduate standing. May be repeated for 99 hours.

CSES6623 Forage-Ruminant Nutrition (Odd years, Sp)
Advanced chemical, physical, and botanical characteristics of forage plants, the dynamics of grazing, intake and digestion, and techniques of measuring forage utilization and systems analysis at the plant-herbivore interface. Lecture 3 hours per week. (Same as ANSC 6253)
Prerequisite: ANSC 3143 and CSES 3113. (Same as ANSC 6253)

CSES700V Doctoral Dissertation (Sp, Su, Fa) (1-18)
Prerequisite: graduate standing.

Civil Engineering (CVEG)

CVEG1012 Civil Engineering Fundamentals (Sp, Fa)
Introduces the concepts of engineering design and establishes the foundation of a professional career. Format
An introduction to the design and graphic representation of civil structures as a class project. Develop skills in photo matching for placement of designed structures in real environment. Prerequisite: senior standing.

CVEG4053 Land Surveying (Irregular) Historical background of property surveys. Detailed consideration of original surveys and the United States Public Land Surveys. Writing reports and presenting information in the form of drawings. Excess and deficiency. Riparian rights. Field practice in relocation of old corners. Prerequisites: senior standing and CVEG 2053.

CVEG4083 Construction Surveys (Irregular) Sun and Polars observations for astronomic azimuth, solar access studies; control traversing, leveling, triangulation; state plane coordinate systems. Lecture 2 hours, laboratory 3 hours per week. Corequisite: CVEG 2053 and CVEG 2051L.

CVEG4143 Foundation Engineering (Sp, Fa) Analysis and design of retaining walls, footings, sheet piles, and piers. Determination of foundation settlements in sand and clay. Prerequisite: CVEG 1113 and CVEG 3133.

CVEG4153 Earth Structures (Irregular) The use of soil as a construction material including compaction, cement, lime, and fly ash stabilization. Special topics include seepage, slope stability, swelling, and collapsible soils. Prerequisite: CVEG 3133.

CVEG4243 Environmental Engineering Design (Sp, Fa) Application of physical, biological, and chemical operations and processes to the design of water supply and wastewater treatment systems. Prerequisite: CVEG 3223 and CVEG 3243.

CVEG4253 Small Community Wastewater Systems (Irregular) Design of innovative and alternative wastewater collection, transport, and treatment systems typically suited for rural and small community applications. Required 3 hours of lecture and 3 hours of lab. Prerequisites: CVEG 3243.

CVEG4263 Environmental Regulations and Permits (Fa) Topics include federal and state environmental regulations, the permitting process, permit requirements and related issues. Prerequisite: CVEG 4242 and senior standing.

CVEG4303 Reinforced Concrete Design I (Sp, Fa) Design of reinforced concrete elements with emphasis on the use of ultimate strength design. Analysis and design by working stress design for deflection and crack analysis. Prerequisite: CVEG 2113 and CVEG 3304.

CVEG4313 Structural Steel Design I (Sp, Fa) Design of structural steel elements by elastic design the Load and Resistance Factor Design method. Intensive treatment of tension members, beams, columns, and connections. Pre- or Corequisite: CVEG 2113. Prerequisite: CVEG 3304.

CVEG4323 Design of Structural Systems (SP) An overview of the structural systems of building. Investigates structural design from load identification through structural analysis and design, and includes consideration of fabrication of fabrication or construction and erection issues. Corequisites: CVEG 4811 or CVEG 4821 or CVEG 4831, or CVEG 4841. Prerequisites: CVEG 4303 and 4313.


CVEG4353 Septic Systems (Odd years, Sp) An overview of designing, installing, and monitoring standard and alternative septic systems as well as the rules and regulations that impact septic system design and installation. Required 3 hours per week. Prerequisite: CSES 2203 or CVEG 3213. (Same as ENSC 2023)

CVEG3304 Structural Analysis (Sp, Fa) Truss analysis, influence lines for beams and frames, and effects of moving loads. Deformation of beams, frames, and trusses. Analysis of indeterminate structures by moment area, slope deflection, and correction methods; approximate methods of analysis. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: CVEG 1113 and MEEG 3013.

CVEG491VH Honors Studies in Environmental Engineering (Sp, Su, Fa) (1-6) The study of advanced topics in the environmental engineering field. May include participation in environmental engineering courses normally available only to graduate students. Course may be repeated up to 6 hours total credit with approval of the CVEG honors advisor. Prerequisite: CVEG 3313.

CVEG492VH Honors Studies in Environmental Engineering (Sp, Su, Fa) (1-6) The study of advanced topics in the environmental engineering field. May include participation in environmental engineering courses normally available only to graduate students. Course may be repeated up to 6 hours total credit with approval of the CVEG honors advisor. Prerequisite: CVEG 3313.
CVEG4994 Civil Engineering Design (Sp, Su, Fa) Conduct of a comprehensive open-ended design problem. Integrates concepts through site selection, preliminary design; evaluation of initial and life-cycle costs, formulation of specifications, assessment of alternatives, and consideration of constraints. Lecture 2 hours, laboratory 4 hours per week. Prerequisite: CVEG 3243 and CVEG 3431 and CVEG 3133 and CVEG 4303 or (CVEG 4313).

CVEG5123 Measurement of Soil Properties (Irregular) Consideration of basic principles involved in measuring properties of soils. Detailed analysis of standard and specialized soil testing procedures and equipment. Lecture 2 hours, laboratory 3 hours per week. Corequisite: CVEG 3133. Prerequisite: CVEG 4143.

CVEG5143 Transportation Soils Engineering (Irregular) Advanced study of the properties of surficial soils; soil classification systems; pedology; soil occurrence and variability; subgrade evaluation procedures; repeated load behavior of soils; soil compaction and field control; soil stabilization; soil trafficking and subgrade stability for transport- tion facilities. Prerequisite: CVEG 3133.

CVEG5163 Advanced Soil Mechanics (Irregular) Study of consolidation, shear strength, clay, bearing capacity, and other soil mechanics topics. Emphasis on understanding the basis of soil mechanics topics. Prerequisite: CVEG 4143.

CVEG5173 Advanced Foundations (Irregular) Study of soil-supported structures. Topics include drilled piers, slope stability, pile groups, negative soil friction, foundation design from the standard penetration test and Dutch oint, and other specialized foundation design topics. Prerequisite: CVEG 4143.

CVEG5224 Water and Waste Water Analysis (Irregular) Application of chemistry to environmental engineering. Quantitative determinations of constituents in water and wastewater. Principles of bacteriological laboratory techniques. Lecture 3 hours, laboratory 3 hours per week. Prerequisite: CVEG 3243.

CVEG5224 Groundwater Hydrology (Fa) Detailed analysis of groundwater movement, well hydraulics, groundwater pollution and artificial recharge. Surface and subsurface investigations of groundwater and ground water management. Principles of groundwater and groundwater modeling will be addressed. Prerequisite: CVEG 3223.

CVEG5223 Microbiology for Environmental Engineers (Irregular) Fundamental and applied aspects of microbiology and biochemistry relating to water quality control, wastewater treatment, and stream pollution. Prerequisite: CVEG 3243.

CVEG5263 Stream Pollution Analysis (Irregular) The determination and identification of degradation and reaeration rates to stream pollution analysis. A study of biological degradation rates for municipal and industrial wastes. Prerequisite: CVEG 3243.

CVEG5273 Open Channel Flow (Sp) Open Channel Flow includes advanced open channel hydraulics, flow measurement techniques, a hydrology review, culvert and storm drainage facility design, natural channel classification (fluvial geomorphology), water quality management, and environmental issues. Prerequisite: CVEG 3213 and CVEG 3223.

CVEG5283 Solid Waste Management (Irregular) Collection, processing and disposal of solid waste with emphasis on incineration, and sanitary landfilling systems. Supplementary transportation and transfer systems are included. Hazardous waste disposal design and regulatory considerations are discussed. Prerequisite: CVEG 3243.

CVEG5293 Water Treatment & Distribution System Design (Irregular) Design of industrial and municipal water systems. Discussion of raw and treated water requirements for the several uses. Distribution system analysis and design including distribution storage and pumping. Prerequisite: CVEG 3243.

CVEG5313 Matrix Analysis of Structures (Irregular) Energy method: digital computer techniques of structural analysis as applied to conventional forms, space trusses, and frames. Prerequisite: CVEG 3304.


CVEG5334 Highway Bridges (Irregular) Economics of spans, current design and construction specifications, comparative designs. Possible refinements in design tech- niques and improved utilization of materials. Prerequisite: CVEG 4133 and CVEG 4303.

CVEG5338 Recommended Methods in Civil Engineering (Irregular) An understanding of the funda- mentals of the finite element method and its application to structural configurations too complicated to be analyzed without computer use. Emphasis on areas of civil engineering analysis and design such as soil mechan- ics, foundations, fluid flow, and flow through porous media. Prerequisite: graduate standing.

CVEG5403 Advanced Reinforced Concrete II (Irregular) Design of circular and rectangular reinforced concrete tanks for fluid and granular loads. Prerequisite: CVEG 4303.

CVEG5413 Transportation and Land Development (Irregular) Study of interaction between land development and the transportation network. Application of planning, design, and operational techniques to manage land development impacts upon the transportation system, and to integrate land layout with transportation network lay- out. Prerequisite: graduate standing.

CVEG5423 Structural Design of Pavement Systems (Irregular) An introduction to the structural design of pavement systems including: survey of current design procedures; study of rigid pavement jointing and reinforcement practices; examination of the behavioral char- acteristics of pavements, and rigid and flexible pavement systems; introduction to structural analysis theories and to pavement management concepts. Prerequisite: CVEG 4303.

CVEG5433 Traffic Engineering (Irregular) A study of the underlying theory and the use of traffic control devices (signs, traffic signals, pavement markings), and rela- tionships to improved traffic flow and safety, driver and vehi- cle characteristics, and traffic control of special conditions. Also includes methods to collect, analyze, and use traffic data. Prerequisite: CVEG 3413 or graduate standing.

CVEG5443 Transportation Planning Practices (Irregular) A study of the procedures, methodologies, and types of reports that are employed to plan for a variety of transportation needs, and how these transportation plans are developed and used. Prerequisite: graduate standing.

CVEG5453 Asphalt Mix Design and Construction (Irregular) Theory and practice of asphalt concrete mix design for pavements and bases including specifications and construction methods for hot-mixes and surface treatments. Lecture 2 hours, laboratory 3 hours per week. Prerequisite: CVEG 3413 and CVEG 4433.

CVEG5463 Transportation Network Modeling (Irregular) Analytical approach to the use of math- ematical techniques and computer models to represent urban transportation systems. Deterministic and stochastic methods for trip generation, distribution, modal choice, and assign- ment. Prerequisite: CVEG 3413.

CVEG5473 Transportation System Characteristics (Irregular) Introduction to traffic flow theory, including traffic stream interactions and capacity. Applications for planning, design, operations. Prerequisite: CVEG 3413 and graduate standing.

CVEG5483 Transportation Management Systems (Irregular) Six transportation management systems are explored: pavement, bridge, intermodal, public transportation, safety, and congestion. System approaches are presented. Techniques are introduced on how to optimally allocate resources. Pavement and bridge structure basics are dis- cussed and their performance parameters are presented. Case studies are used to illustrate the interfaces among vari- ous modes of transportation. Safety and congestion problems in transportation are addressed. Prerequisite: CVEG 5493 or CVEG 5482.

CVEG5483 Management with GIS & DB (Irregular) Use of the major components of a Geographical Information System (GIS). Learn to define proj- ect scheme, create a project build categories and features, and perform data processing. Use of dynamic visualization and multimedia capabilities. Application of Relational Database Management System (RDBMS) and database interface service to GIS. Introduction to Global Positioning System (GPS). Prerequisite: CVEG 3413.

CVEG552V Research (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

CVEG700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

CVEG562V Research (Sp, Su, Fa) (1-6) Prerequisite: honors standing. (Same as DACN 1003)

CVEG573 Air Pollution (Irregular) Fundamental principles of air pollution, causes, and effects, as well as control methods with application to current industrial problems. Prerequisite: graduate standing. (Same as CHEG 5753)

CVEG600V Master’s Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

DANCE (DACN)

DACN1003H Honors Basic Course in the Arts: Movement and Dance (Sp, Su, Fa) Introduction to the nature and scope of ballet, ethnic, and modern dance forms, their potential for contributing towards multicultural literacy, and to the shaping of an American audience. Considered of lectures, videos, and movement experiences in the form of studio labs. Prerequisite: honors standing. (Same as DACN 1003)

DACN1003 Basic Course in the Arts: Movement and Dance (Sp, Su, Fa) Introduction to the nature and scope of ballet, modern dance, and ethnic-rural-world dance forms, their potential for contributing towards multicultur- al literacy, and to the shaping of an American audience. Considered of lectures, videos, and movement experiences in the form of studio Labs.

DACN1553 Practicum in Choreography and Improvisation (Sp, Su, Fa) Introduces the student to the structure of modern dance movement and composi- tion. Student explores the basic elements of dance: space, time, shape, and rhythm through the use of improvisational movement problems and formal choreographic studies. Prerequisite: DACN 1912.

DACN1912 Beginning Modern Dance (Sp, Fa) Introduction to basic techniques with an emphasis on acquir- ing flexibility, strength, and coordination.

DACN1912 Beginning Modern Dance II (Sp, Su, Fa) A continuation of basic modern dance techniques from DACN 1912, with emphasis on weight, time, and shape in movement. Prerequisite: DACN 1912.

DACN1912 Beginning Ballet (Sp, Fa) Introduction to the basic techniques of ballet in the recognized classical form including barre exercises, port de bras, and center practice.

DACN1942 Beginning Ballet II (Sp, Su, Fa) A continuation of the basic techniques of classical ballet from DACN 1922. Prerequisite: DACN 1932.

DACN1951 Tap Dance (Sp, Fa) Basic steps and com- binations of tap dancing.

DACN2951 Theatre Dance (Fa) Contemporary dance forms of the musical comedy stage. Prerequisite: DACN 1911.

DACN2981 Jazz I (Fa) Basic techniques and combina- tions of jazz and tap dance.

DACN2991 Jazz II (Sp) Intermediate techniques and combinations of jazz and tap dance.

DACN3912 Intermediate/Advanced Practicum in Modern Dance Technique (Sp, Su, Fa) Further develops space-time coordination and more complex dance techniques that emphasize the development of individual style. Prerequisite: DACN 1912.

DACN3932 Intermediate/Advanced Practicum in Ballet Technique (Sp, Su, Fa) Designed to refine alignment, improve control and precision, and develop perform- ance presentation for executing adage and allegro combi- nations. Prerequisite: DACN 1932.

DACN5003 Practicum in Using the Arts to Teach About Culture in Grades K - 6 (Su) Designed for the elementary classroom teacher, the course assists the student in creating meaningful pedagogical methods and materials to be used for introducing children to a variety of cultures.
Course Descriptions

Degree Studies (DGST)

DGST600V DEGREE STUDIES (1-18)

Drama (DRAM)

DRAM1003H Honors Basic Course in the Arts: Theatre Lecture (FA) (Same as DRAM 1003,F A 1022,F A 113,FINE ART 113,FINE ART 113.3,FNAR 1022) DRAM1003 Basic Course in the Arts: Theatre Lecture (Sp, Su, Fa) Introduction to theatre arts; playwriting, directing, acting, and design. For the general student. May not be presented toward satisfaction of the B.A. in fine arts requirement by drama majors. (Same as DRAM 1003H) DRAM1223 Introduction to Dramatic Art (Sp, Fa) Introduction to and examination of the various elements that make up dramatic art. Study of the history, literature, theory, and practice of the theatre, from ancient to modern times, from the playwright to the producer. (Same as DRAM 223) DRAM1311L Stage Technology I Laboratory (Fa) Practical application of costume technology and makeup skills. Students will participate in projects involving the construction and preparation of costumes and makeup designs associated with various theatre productions. Production running crew positions will also be assigned. Corequisite: DRAM 1313. DRAM1313 Stage Technology I: Costumes and Makeup (Fa) Fundamentals of basic costume construction with an emphasis on techniques, materials, planning and process. Training in the basic principles of theatrical makeup application. Corequisite: DRAM 1311L. DRAM1321L Stage Technology II Laboratory: Scenery and Lighting (Sp) Practical application of principles of scenery and lighting technology. Students will participate in projects involving the construction and preparation of scenery, stage properties, and lighting associated with departmental productions. Production running crew positions will also be assigned. Corequisite: DRAM 1323. DRAM1323 Stage Technology II: Scenery and Lighting (Sp) Fundamentals of scenery and lighting technology with emphasis on theatre tools, equipment, and basic drafting. Training in basic principles and skills of stage carpentry, lighting technology and rigging. Corequisite: DRAM 1321L. DRAM1683 Acting I (Sp, Su, Fa) An analytical approach to the actor's art with emphasis on the techniques of characterization. DRAM2013 Introduction to Theatrical Design (Fa) Fundamentals of design for the theatre including costume, lighting, and scenery. Study of the designer's role in the production process, design requirements, and aesthetics. Emphasis on the basic principles of two-dimensional art and graphic forms through various media, and a study of color and color theory as they apply to the major areas of theatrical design. Prerequisite: DRAM 1233 AND dram 1321L. DRAM2683 Acting II (Sp) (Formerly DRAM 4633) Advanced theories and techniques of acting. Prerequisite: DRAM 1223 and DRAM 1683. DRAM3001 Production Practicum (Sp, Su, Fa) Credit for participation in technical assignments related to mainstage or faculty-directed productions: one (1) credit hour per production. Assignments shall be determined by the faculty. Credit will be awarded only after completion of assignments and with faculty approval. May be repeated up to 4 hours. May be repeated for 4 hours. DRAM3011 Performance Practicum (FA, SP, SU) Credit for performance in faculty directed productions: one credit hour per production. Assignments shall be determined by the faculty. Credit will be awarded only after satisfactory completion of assignment and with faculty approval. May be repeated only four times. May be repeated for 4 hours. DRAM3231 Costume Design I (Odd Years, Fa) Study of the art and practice of stage costume design. Emphasis on the expression of character through costume. Development of rendering and research skills. Prerequisite: DRAM 1313. DRAM3243 Costume Technology I (Odd Years, Sp) Advanced methods of costume construction techniques and the exploration of theatrical pattern drafting will be practiced through projects. DRAM 1313. DRAM3433 Stage Speech (Sp, Su, Fa) An introduction to the basics of speech, voice production and communication for performance and broadcasting. Special focus on General American English with attention given to the characteristics of speech regionalism. The course will explore breath control, resonance, articulation, pitch, volume, voice quality and stress management. Prerequisite: DRAM 2633. DRAM3653 Costume Design II (Odd Years, Fa) Study of the techniques and principles of play directing with an emphasis on the modern realistic mode of production. Corequisite: Drama majors with at least junior standing. Prerequisite: DRAM 1223, DRAM 1313, DRAM 1321L and DRAM 2683. DRAM3683 Stage Management (Odd Years, Fa) Principles of stage management in the context of academic and professional theatre production. Issues of theatre management and production administration as they relate to production activities. Prerequisite: DRAM 1223, DRAM 1313 and DRAM 1323. DRAM3733 Stage Lighting I (Even Years, Fa) Study of the art and practice of stage lighting; color theory; electricity and dimming systems; problems in design. Lecture-demonstration 3 hours, laboratory, by arrangement, coinciding with departmental productions, 3 hours per week. Prerequisite: DRAM 1323 and DRAM 1321L. DRAM3803 Development of the Drama (Sp, Fa) An introductory survey of theoretical approaches to theatre and drama. This course investigates various paradigms for understanding drama in an area of specialization. May be repeated for 12 hours. Readings include a cross-section of literary and performance theories ranging from the classical to the post-modern. Prerequisite: DRAM 1223. DRAM3823 Scenario Interpretation (Irregular) Techniques for making sense of playscripts and finding their theatrical demands, including beat/objective/motive/action structuring, use of the fictional and functional models of the text, imagery analysis, and identification of meaning and meaning modes of meaning. Each student focuses on one script for the full term. Prerequisite: DRAM 1223 and DRAM 3803. DRAM3903 Theatrical Makeup (Even Years, Fa) The techniques and skills of theatrical makeup and design involved in the creation and execution of character makeup for the stage. Prerequisite: DRAM 1313. May be repeated for 99 hours. DRAM3923H Honors Colloquium (Sp, Su, Fa) Treats a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in drama). May be repeated for 54 hours. DRAM399VH Honors Course (Sp, Su, Fa) (1-6) Prerequisite: junior standing. May be repeated for 12 hours. DRAM404V Playwriting (Fa) (1-3) A workshop course for students who wish to attempt original work in the dramatic form. Prerequisite: junior standing. May be repeated for 9 hours. DRAM4153 Musical Theatre Performance (Sp, Su, Fa) Principles and techniques of performing a singing role for the theatre. Emphasis on the relationship between score and text. May be repeated for 6 hours. DRAM4223 History of the Theatre I (Fa) A survey of dramatic literature, theatre practices and cultural contexts for dramatic presentation in Greece through the Restoration. Prerequisite: DRAM 1223. DRAM4233 History of the Theatre II (Sp) A survey of dramatic literature, theatre practices and cultural contexts for dramatic presentation from the 18th century to the mid-20th century. Emphasis is given to Western theatre practices. Prerequisite: DRAM 1223. DRAM4453 History of the Theatre III (Sp) An examination of history and theory of modern theatrical styles. (Same as DRAM 4453I) DRAM4463 African American Theatre History (Irregular) Prerequisite: DRAM 1223. Examination of African-American theatre history from 1950 to the present through the study of African-American plays and political/social conditions. Upon completion of this course the student should be familiar with the major works of African-American theatre and have a deeper understanding of American History. (Same as AAST 499V) DRAM4653 Scene Design I (Odd years, Sp) Theory and practice of scenic design, including historical and contemporary styles and procedures. Practical experience gained through work on departmental productions. Prerequisites: DRAM 1323, DRAM 1321L and DRAM 2683. DRAM4733 Dramatic Criticism (Sp, Su, Fa) Analysis of critical theories from Aristotle to the present; interrelationships of theatre disciplines as well as the influence of the church, state, and press on dramatic criticism. Prerequisite: DRAM 3803. DRAM4773 Acting Shakespeare (IR) Work on the techniques required for performance of the plays of Shakespeare and his contemporaries. The cultural and theatrical context required for understanding the scripts. Special focus to the speaking of blank verse. DRAM478V Theatre Workshop (Su) (1-6) Production of plays for public performance by all members of the workshop. Mornings are spent in instruction and labor- atory work preparing sets, lighting, costumes, and properties. Afternoons are spent in instruction and directing, rehearsal of plays in production. Special problems for gradu- ate students. Prerequisite: junior standing. DRAM490V Independent Study (Sp, Su, Fa) (1-3) Individually designed and conducted programs of reading and reporting under the guidance of a faculty member. DRAM491V Special Topics (Sp, Su, Fa) (1-3) Classes not listed in the regular curriculum, offered on demand on the basis of student needs and changes within the profession. May be repeated for 99 hours. DRAM492V Internship (Irregular) (1-12) Supervised practical experience in the various arts and crafts of the theatre (e.g., full design responsibility for a box office manager; actor apprenticeship in a professional company). Available only to those who have exhausted the regular curriculum possibilities associated with departmental productions. May be repeated for 12 hours. DRAM4953 Theatre Study in Britain (Sp, Su, Fa) Study of the components of stage production through attending and critiquing a wide variety of classical, modern, and contemporary theatre productions. Emphasis is given to productions of London and historical British sites and seminars with British theatre artists. DRAM5123 Theatrical Design Rendering Techniques (Sp, Su, Fa) Investigation of drawing and painting methods and materials useful to theatrical designers. Integration of graphic communication with overall production conceptualization will be explored through examination of various theatre styles and periods. DRAM5143 History of Decor for the Stage (Even Years, Sp) An overview of architectural decoration and its application to theatrical design from the Pre-Naxicatistic Period (2300 B.C.) through the Renaissance and the emergence of a departmental specialization in contemporary decor. Prerequisite: graduate standing. DRAM5153 Scene Painting (Su) A studio class in painting techniques for the theatre. Problems in color, texture, style and execution with appropriate analysis and research documentation. Graduate level project required. DRAM5163 Theatre Graphics and Technology (Irregular) Advanced study of theatre drafting, drawing and rendering techniques and model making. Graduate level project portfolio required. DRAM5213 Costume Design (Odd, Fa) Advanced study of the art and practice of costume design. Emphasis on the expression of character through costume. Development of rendering and research skills. Portfolio development. DRAM5243 Costume Technology I (Odd Years, Sp) Advanced methods of costume construction techniques and the practice of theatrical pattern drafting will be explored through project work. DRAM5253 Costume Technology II (Even Years, Sp) Advanced study in methods of costume construction and pattern making techniques with emphasis on tailoring, draping, corsety and costumes crafts as determined by student needs. Prerequisite: DRAM 5243 and DRAM 5243. DRAM5263 Costume Shop Management (Irregular) Comprehensive study of costume shop management including physical space, equipment, personnel, budgeting, and time management techniques. Practical application through actual production experience in the University Theatre. DRAM5323 Stage Lighting II (Irregular) Entry level graduate study in lighting design and analysis, lighting for dance and musical theatre, equipment as it relates to the designer. Graduate level project required. DRAM5333 Lighting III (Sp, Su, Fa) Advanced study of design, technology and production development collaboration involved in lighting at the professional level. Theatre, screen and architectural venues will be examined. Dance, regional theatre, legitimate dramatic, and all manner of lighting situations will be explored through class projects and laboratory exercises. Prerequisite: graduate standing. DRAM5353 Stage Lighting Technology (Sp, Su, Fa) The thorough examination of the technology of equip-
ment that supports the art of stage lighting design: theory, operating principles and specification of lamps, fixtures, control panels and special project hardware will be explored. Prerequisite: graduate standing.

DRAM5363 Theatre Planning (Irregular) A study of significant theatre buildings, modern and historical, and their relationship to theatre planning. Practical application of theory through design problems and evaluation. Graduate level research project/paper required.

DRAM5373 Theatre Management (Irregular) Comprehensive study of management including personnel, budget, audience development, operations and organization for professional, academic and community theatre and related performance areas. Practical application through actual production experience in the University Theatre.

Graduate level research paper required.

DRAM5403 Acting/Directing Techniques (Sp, Su, Fa) Examination of the major forms of acting and directing techniques and theories. Practical application through analysis and scene work, with students functioning as both director and actor throughout the course. Prerequisite: graduate standing.

DRAM5413 Graduate Acting Principles (Sp, Su, Fa) An intensive study and practical application of acting techniques. Emphasizes the integration of the physical, emotional, and intellectual life of the character through work on monologues, scripts and exercises. Prerequisite: Graduate standing in Drama.

DRAM5432 Graduate Stage Speech (Sp, Su, Fa) Focus will be on enabling the body's natural breathing mechanism to provide vocal support. freed from unnecessary tension, resonance, articulation and vocal hygiene will also be explored as they relate to clear vocal production. Prerequisite: Graduate standing. May be repeated for 4 hours.

DRAM5443 Graduate Acting: Period Styles (Sp, Su, Fa) Styles of acting in relation to French and English Dramatic Literature (16th-19th Centuries). This course also examines the historical and cultural influences that shaped each genre. A period dance component is included. Prerequisite: Graduate standing in Drama.

DRAM5453 Musical Theatre Performance (Sp, Su, Fa) An exploration of the techniques of performing a singing role for the theatre. Integrates acting and vocal techniques and examines the relationship between score and text. Prerequisite: Graduate standing in Drama.

DRAM5463 Audition Techniques (Sp, Su, Fa) A thorough study and practical application of audition skills and techniques. This course will equip the student with prepared audition pieces and experience in cold reading, on-camera work, and improvisation. The course also explores the practical needs of the actor; how to get an audition to how to prepare a resume. Prerequisite: Graduate standing in Drama.

DRAM5473 Shakespeare (Sp, Su, Fa) Analysis of Shakespeare for performance. Works will include the plays of Shakespeare and his contemporaries, including cultural and theatrical contexts required for understanding the scripts. Prerequisite: Graduate standing in Drama.

DRAM5503 Research Techniques in Drama (Fa) Basic techniques of research and study in the fields of Drama and Theatre with consideration of the necessary interplay of intellectual and intuitive skills in mature artistry. Practice in the logical, semantic, and evidential work of scholarship and in the various research methodologies.

DRAM5513 Graduate Playwriting: Realism (Sp, Su, Fa) Advanced theory and technique in playwriting emphasizing the realistic mode. Explorations into the manner of expression, plotting the action, and revealing multiple levels of meaning. May be repeated for 6 hours.

DRAM5523 Graduate Playwriting: Non-Realism (Sp, Su, Fa) Advanced theory and technique in playwriting emphasizing non-traditional playwriting styles such as Expressionism, Surrealism, Epic Theatre and the American Musical. Prerequisite: graduate standing.

DRAM5533 Graduate Playwriting: Special Projects (Sp, Su, Fa) Advanced study and practice in the areas of emphasis designated by the student and approved by the faculty. Topic area of concentration will be determined by the student's specific writing project(s). Prerequisite: graduate standing. May be repeated for 6 hours.

DRAM558V New Script Ensemble (Sp, Su, Fa) (1-3) An introduction to the craft of new playwriting: directors, actors, playwrights. An exploration of techniques and strategies for approaching the new script and realizing the distinctive elements pertinent to developing the new work. Prerequisite: graduate standing.

EASL0021 Advanced English Grammar (Sp, Su, Fa) Presentation of a general overview of the verb, modal, and article in English. Review and practice on compound and complex sentences. Practice of grammatical principles orally and in writing. Not for degree credit. Prerequisite: ESL placement test.

EASL0023 Reading and Writing I (Sp, Su, Fa) Work on improving skills necessary to write a well-organized thought-provoking essay incorporating paraphrased, summarized, and quoted ideas from various sources. Introduction to several rhetorical patterns. Critical reading skills, understanding concepts, and improving reading skills and comprehension. Not for degree credit. Prerequisite: ESL placement test.

EASL0033 Reading and Writing II (Sp, Su, Fa) Advanced writing of essays, expository, organizational, and thought-provoking essays. Students will learn to read passages/articles in English proficiently and maintain discussion, stress, and pronunciation. Students give presentations and participate in academic discussions. Credit earned in this course may not be applied to the total required for a degree. Prerequisite: ESL placement test.

ECON1123 Economic Development of the United States (Fa, Sp, Su) Development of American economic institutions from Colonial times to present. Present-day economic institutions and problems. (Credit not granted to students who have already completed ECON 2041 and ECON 2042.) (Same as ECON 1123)

ECON2013H Honors Principles of Macroeconomics (Fa) Macroeconomic analysis, including aggregate employment, income, fiscal and monetary policy, growth and business cycles. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2013)

ECON2013 Principles of Macroeconomics (Sp, Su, Fa) Macroeconomic analysis, including aggregate employment, income, fiscal and monetary policy, growth and business cycles. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2013H, ECON 2023)

ECON2023H Honors Principles of Microeconomics (Sp, Su, Fa) Microeconomic analysis, including market structures, supply and demand, production costs, price and output, and international economics. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2023H, ECON 2023)

ECON2023 Principles of Microeconomics (Sp, Su, Fa) Microeconomic analysis, including market structures, supply and demand, production costs, price and output, and international economics. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2023H, ECON 2023)

ECON2143 Basic Economics-Theory and Practice (Sp, Su, Fa) Microeconomic analysis, including market structures, supply and demand, production costs, price and output, and international economics. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2023H, ECON 2023)

ECON2143 Principles of Microeconomics (Sp, Su, Fa) Microeconomic analysis, including market structures, supply and demand, production costs, price and output, and international economics. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2023H, ECON 2023)

ECON2043 Microeconomic Theory (Sp, Fa) Nature, scope, and purpose of economic analysis; theories of demand, supply and demand, production, costs, price and output, and international economics. Prerequisite: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH 2043 or higher). (Same as ECON 2023H, ECON 2023)

ECON2053 Economics for Elementary Teachers (Fa) For students who plan to become teachers in elementary schools. Acquaints students with basic concepts and functioning of the American economic system. Not open to students majoring in Economics or Business Administration. Prerequisite: Students must have completed at least 60 hours of coursework.

ECON3133 Macroeconomic Theory (Sp, Fa) Theoretical determinations of national aggregate employment, income, consumption, investment, price level, etc. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON3153 Economics of Electronic Commerce (Irregular) A combination of concepts from microeconomics, institutional economics, and macroeconomics in examining how electronic markets and the use of information impact economic activity. The course combines theoretical models, field data and cases to explore the issues of pricing strategy, network effects, information goods, market mechanisms and verifiability. Prerequisite: ECON 2023 or ECON 2143.

ECON3333 Public Finance (Irregular) Governmental functions, revenues, tax shifting, incidence; public expenditure, their effects; and fiscal policy. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON3353 Law and Economics (Irregular) The use of economic tools to analyze public policy issues and
Course Descriptions

For economic development. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON333 Money and Banking (Sp, Su, Fa)
Financial intermediaries; theory of practice and income; monetary policy in theory and practice. Prerequisite: ECON 2013 and ECON 2023 and ECON 2143.

ECON353 Labor Economics (Fa)
Economic analysis of labor supply and demand; human capital investment; wage differentials; discrimination; economic effects of labor unions and collective bargaining; public sector labor markets; unemployment; and labor market information. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON3633 Advertising Economics (Irregular)
An examination of how economists define and categorize types of products and advertising campaigns. Alternative views of advertising — persuasive vs. informative — are discussed. Models of the relationship between advertising and sales, profits, market structure, product quality, and price are examined. Prerequisite: ECON 2033 or ECON 2143.

ECON3843 Economic Development, Poverty, & the Role of the World Bank and IMF in Low-Income Countries (Sp)
Examine theories and patterns of economic development. The role of the World Bank and IMF as multilateral lenders and examination of their success and failures in fostering development. Measures of poverty and inequality and their implications for economic development. Prerequisites: (ECON 2013 and ECON 2023) or ECON 2143.

ECON3853 Emerging Markets (Irregular)
An analysis of the business and economic environment in emerging countries in South East Asia and Transition Economies. The topics and issues covered include market structure and market failures, financial and legal background.前沿 studies in microeconomic and macroeconomic issues, and current business opportunities. Prerequisite: ECON 2143; or ECON 2033 and ECON 2023.

ECON3933 The Japanese Economic System (Sp)
This class presents essential facts about the Japanese economy and a glimpse to its future in the context of modern economic analyses. Japanese institutions and policies are contrasted with their American counterparts, and these economies are compared in terms of performance. Current issues including contemporary economic conditions and US - Japanese trade relations are also examined. Pre- or Corequisite: ECON 2033. Prerequisite: ECON 2013 or ECON 2143.

ECON4003H Economics Honors Colloquium (Irregular)
This course will provide students with a strong foundation in core economic principles, with emphasis on international organization of American public education; fundamental principles of school management and administration. Prerequisite: (AGEC 1103 or AGEC 5613) and (AGEC 5613 or ECON 6233).

ECON4033 History of Economic Thought (Fa)
Overview of basic economic facts and theory and statistical methods to estimate economic models. Prerequisite: Graduate standing.

ECON4143 Information Economics (Irregular)
A combination of concepts from microeconomics, industrial organization, and probability to examine how economic actors use information in decision-making. The course combines theoretical models and case studies to develop an understanding of the role of information and incentives. Prerequisite: ECON 2033 or ECON 2143.

ECON4333 Economics of Organizations (Fa)
An economic perspective on the design of organizations. Applies developments in game theory and contract theory to analyze the role of information and incentives within and between firms. Covers the boundaries of firms, integration and outsourcing, authority and incentives, and alternative organizational structures in an evolving business environment. Prerequisite: ECON 2013 or ECON 2023 or ECON 2143.

ECON4433 Experimental Economics (Sp)
The course offers an introduction to the field of experimental economics. Includes an introduction to laboratory experiments. Standard behavioral results are examined and the implications of such behavior for business and economic theory are explored. Prerequisite: ECON 2023 or ECON 2143.

ECON4505 Independent Study (Irregular) (1-6)
Permission of instructor is required to select topics in economics.

ECON4633 International Trade Policy (Sp, Fa)
Problems of the international economy from a macroeconomic perspective. Topics include international trade, trade barriers, terms of trade, and the balance of payments. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON4643 Monetary Policy (Sp, Fa)
Problems of the international economy from a macroeconomic perspective. Topics include international trade, trade barriers, terms of trade, and the balance of payments. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON4653 Global Competition and Strategy (Irregular) (1-6)
Applies concepts from microeconomics and international organizations to competitive decision-making in national and international business environments. Topics include industry analysis, competitive advantage, entry, competitive pricing, commitment, antitrust, exit, vertical integration, R&D, licensing, and standards. These issues will be discussed in the context of international strategies and global firms. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON466V International Economics and Business Seminar (Sp, Su, Fa) (1-4) Offered primarily in conjunction with international study abroad programs with an emphasis on international economics and business. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143. May be repeated for credit.

ECON4743 Introduction to Econometrics (Sp, Su) (1-4) Offered primarily in conjunction with international study abroad programs with an emphasis on international economics and business. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143. May be repeated for credit.

ECON4753 Forecasting (Sp, Su) The application of forecasting methods to economics, management, engineering, and other natural and social sciences. The student will learn how to recognize important features of time series and will be able to estimate and evaluate econometric models that fit the data reasonably well and allow the construction of forecasts. Prerequisite: (ECON 2013 or ECON 2023) or ECON 2143 and (MATH 2043 or MATH 2554) and (MATH 2053 or MATH 2553 C) and (WOB 1033 or STAT 2303).

ECON512V Workshop in Economic Education (Irregular) (1-3) Overview of basic economic facts and principles with emphasis on means of employing them in the curriculum. Topics to include microeconomic and statistical skills for learning economics and related fields. Topics include calculus, static optimization, real analysis, linear algebra, convex analysis, and dynamic optimization. Prerequisite: Graduate standing and MATH 2554 or equivalent.

ECON5243 Economics of Supply Chain & Retail (Sp) This course will provide students with a strong foundation in core economic principles, with emphasis on international organization of American public education; fundamental principles of school management and administration. Prerequisite: (AGEC 1103 or AGEC 5613) and (AGEC 5613 or ECON 6233).

ECON5613 Econometrics (Fa)
Econometrics is the application of statistical methods to economic data in order to formulate data-driven models that can be used to make predictions and inferences. Prerequisites: ECON 5533 or ECON 6233.

ECON6243 Macroeconomic Theory (Irregular) Further development of macroeconomic models to include uncertainty and asset pricing theory. Application of macroeconomic models to explain real world situations. Prerequisite: ECON 5613 or ECON 6233.

ECON6533 Special Problems in Economics (Sp, Su, Fa) Independent reading and investigation in economics. May be repeated for 6 hours.

ECON664V Seminar in Economic Theory and Research I (Fa) (1-3) Independent research and group discussion.

ECON6653 Seminar in Advanced Economics I (Ir) This seminar will cover advanced fields of current research interest in economics. This will facilitate the development of research directions for doctoral study and research. Prerequisite: Graduate standing.

ECON6654 Seminar in Advanced Economics II (SP) This seminar will cover advanced fields of current research interest in economics. This will facilitate the development of research directions for doctoral study and research. Prerequisite: Graduate standing.

ECON6683 Economics II (Sp) Use of economic theory and statistical methods to estimate economic models. The treatment of measurement error and limited dependent variables and the estimation of multiple equation models and basic panel data models will be covered. Additional frontier techniques may be introduced. Prerequisites: ECON 5613 or AGEC 5613. (Same as AGEC 5623)

ECON6693 Economics III (SP) Use of economic theory and statistical methods to estimate economic models. Nonlinear and semiparametric/nonparametric methods, dynamic panel data methods, and time series analysis (both stationary and nonstationary processes) will be covered. Additional frontier techniques may be covered. Prerequisite: ECON 5613.

ECON7070V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

Economic Development (EDAD)

EDAD5013 School Organization and Administration (Irregular) Analysis of structure and organization of American public education; fundamental principles of school management and administration. Prerequisite: ECON 2033 or ECON 2143.

EDAD5023 The School Principalship (Sp, Su) Duties and responsibilities of the public school building administrator; examination of educational problems, issues, and current trends in the theory and practice of the principalship.

EDAD5033 School Law (Irregular) Legal aspects of public and private school organizations and state legislative statutes and judicial decisions, with emphasis upon Arkansas public education.

EDAD5063 School Personnel Administration and
### Course Descriptions

**Supervision (IR)** Principles, processes, and procedures of school personnel management, supervision, and staff development.

**EDAD5093 Effective Leadership in School Settings (Sp, Su, Fa)** Strategic planning, group facilitation and decision making, organizational behavior and development, professional ethics and standards, principles of effective educational leadership.

**EDAD5163 Current Educational Issues (Irregular)** Current problems, issues, and trends facing school administers in Arkansas and the nation.

**EDAD574V Internship (Sp, Su, Fa) (1-6)** Supervised in-school/district experiences individually designed to afford opportunities to apply previously-acquired knowledge and skills in administrative workplace settings. May be repeated for 3 hours.

**EDAD599V Seminar (Irregular) (1-6)** May be repeated for 6 hours.

**EDAD600V Master’s Thesis (Sp, Su, Fa) (1-6)**

**EDAD6023 School Facilities Planning and Management (Irregular)** School facilities planning, management, cost analysis, operations, and maintenance of the school plant.

**EDAD6053 School-Community Relations (Irregular)** Community analysis, politics and education; power groups and influences; school issues and public responses; local government and implementation of effective communication and public relations strategies.

**EDAD605V Independent Study (Sp, Su, Fa) (1-3)**

**EDAD6093 School District Governance: The Superintendent (Irregular)** Analysis of the organizational and governance structures of American public education at national, state, and local levels.

**EDAD6103 School Finance (Irregular)** Principles, issues and problems of school funding formulas and fiscal allocations to school districts.

**EDAD6173 School Business Management (Irregular)** Fiscal and resource management in public schools; budgeting, insurance, purchasing, and accounting.

**EDAD6333 Advanced Fiscal and Legal Issues in Education (Irregular)** The examination and discussion of advanced legal and fiscal issues affecting public school education at the state and federal level.

**EDAD6503 Topics in Educational Research for School Administration (Irregular)** Application of educational research in the setting of educational administrators. Emphasis is placed on the use of state and local school or district data, data analysis, interpretation and reporting, hands-on experience with SPSS, and the formal process of writing a research report. Prerequisite: advanced graduate standing.

**EDAD6523 Advanced Application of Educational Leadership (Irregular)** A review of seminal and current works on leadership as applied to the educational setting. Provides knowledge of classic and contemporary strategies for leadership.

**EDAD6533 Educational Policy (Irregular)** Examination of the research and theory related to the evolution of laws, statutes, and federal governance and educational policy. Emphasis given to the consideration of procedures involving policy formulation, implementation, and analysis.

**EDAD6563 Educational Administration and Human Behavior (Irregular)** Examination of research and theory related to the utilization of human resources with educational organizations.

**EDAD660V Workshop (Sp, Su, Fa) (1-6)** May be repeated for 6 hours.

**EDAD674V Internship (Sp, Su, Fa) (1-6)** May be repeated for 6 hours.

**EDAD676V Educational Specialist Project (Sp, Su, Fa) (1-6)** An original project, research project, or report required of all Ed.S. Degree candidates. Prerequisite: admission to the Ed.S. program.

**EDAD699V Directed Readings in Educational Administration (Sp, Su, Fa) (1-3)** Selected readings from classical books and authors in the field.

**EDAD699V Seminar (Irregular) (1-6)** Prerequisite: advanced graduate standing. May be repeated for 6 hours.

**EDAD700V Doctoral Dissertation (Sp, Su, Fa) (1-18)** Prerequisite: candidacy.

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**Educational Foundations (EDFD)**

**EDFD2403 Statistics in Nursing (Sp)** Introduction to descriptive and inferential statistics used in nursing research.

**EDFD5013 Research Methods in Education (Sp, Su, Fa)** General orientation course which considers the nature of research problems in education and the techniques used by investigators in solving those problems. Prerequisite: graduate standing.

**EDFD5303 Historical Foundations of Modern Education (Irregular)** Historical analysis and interpretation of the historical antecedents of contemporary education, focusing upon the American experience from the colonial period to the present.

**EDFD5323 Global Education (Irregular)** Comparative and global analysis of international education with emphasis on cultural education and implications for the future.

**EDFD5533 Philosophy of Education (Irregular)** Introduction to the method and attitude essential to effective analysis and interpretation of issues and values within a society reflecting cultural, ethnic, gender, and global diversity. Prerequisite: graduate standing.

**EDFD5537 Psychological Foundations of Teaching and Learning (Irregular)** Psychological principles and research applied to classroom learning and instruction. Social, emotional, and intellectual factors relevant to topics such as readiness, motivation, discipline, and evaluation in the classroom.

**EDFD5593 Statistics in Education and Health Sciences (Irregular)** An applied statistics course for Master's degree candidates. Includes concepts and operations for frequency distributions, graphing techniques, measures of central tendency and variation, sampling, hypothesis testing, and introduction to regression. Prerequisite: graduate standing.

**EDFD5473 Adolescent Psychology in Education (Irregular)** Study of the adolescent experience with emphasis on the unique psychological problems and tasks of this developmental period in the facilitation of crises resolutions in social, personal and institutional conflicts. Prerequisite: graduate standing.

**EDFD5557 Life-Span Human Development (Sp, Su, Fa)** Basic principles of development throughout the human life-cycle. Physical, cognitive, social, emotional, and personality development.

**EDFD5563 Educational Assessment (Irregular)** Introduction to an advanced level of content and the development of personal expertise in the areas of assessment and evaluation. Focus on types and usage of assessment tools, data management, and analysis and interpretation of educational data. Practical training in the utilization and interpretation of academic achievement data in Arkansas. Prerequisite: graduate standing.

**EDFD5563 Issues in Educational Policy (Sp, Su, Fa)** This course examines how K-12 education policy is designed and implemented in the United States. Students will develop a working knowledge of the policymaking frameworks and processes for analyzing data as applied in educational settings, including multivariate, dummy variables, analysis of covariance, curvilinear regression, and path analysis. Prerequisite: EDFD 6403.

**EDFD5643 Applied Multivariate Statistics (Sp)** Multivariate statistical procedures as applied to educational settings, including multivariate, dummy variables, analysis of covariance, curvilinear regression, and path analysis. Prerequisite: EDFD 6403.

**EDFD6013 Statistical Methods in Educational Research (Sp)** This course emphasizes the design and implementation of advanced methodological designs. Prerequisite: EDFD 6413.

**EDFD6513 Advanced Experimental Design (IR)** Advanced topics of the general linear model, including hierarchical linear modeling and longitudinal analysis with a focus on developing the mathematical and theoretical basis for these advanced methodological designs. Prerequisite: EDFD 6423.

**EDFD6533 Qualitative Research (Sp, Fa)** Introduction of non-quantitative methods, including data collection through interviews, field observation, records research, internal and external validity problems in qualitative research. Prerequisite: EDFD 6403.

**EDFD6543 Advanced Qualitative Research (Sp)** Preparation for the conduct of qualitative research, structuring, literature reviews, data collection and analysis, and reporting results. Prerequisite: EDFD 6533. May be repeated for 6 hours.

**EDFD6553 Advanced Multivariate Statistics (IR)** Builds on the foundation provided in Multivariate and introduces techniques that extend methodological elements of canonical discriminant, factor analysis, and structural equation analyses, providing the mathematical and theoretical foundations necessary for these designs. Prerequisite: EDFD 6453.

**EDFD6613 Evaluation of Policies, Programs, and Projects (Fa)** Introduction to the evaluation in social science research, including why and how evaluations of programs, projects, and policies are conducted; includes analysis of educational evaluations in a variety of settings. Prerequisite: EDFD 6623 Techniques of Research in Education (Sp, Su) Use of scientific method in attacking educational problems. Emphasis placed on the planning and design of research studies, collection of reliable and valid data, sampling methods, and analysis and interpretation of data. (Required Prerequisite: EDFD 6403). Prerequisite: EDFD 6653 Measurement and Evaluation (Irregular)** Fundamentals of measurement: scales, scores, reliability, validity. Test analysis and item analysis. Standardized measures and program evaluation models in decision making. Prerequisite: EDFD 6403.

**EDFD686V Practicum in Research (Irregular) (1-6)** Practical experience in educational research on campus, in school systems, or in other agencies in educational program development.

**EDFD689V Seminar (Irregular) (1-6)** Prerequisite: advanced graduate standing. May be repeated for 6 hours.

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**Education (EDUC)**

**EDUC100V Freshman Seminar (Irregular) (1-3)** The course is designed to support and assist freshmen in becoming successful, self-directed learners. Focus will be on campus resources to help learners accomplish this goal and upon strategies for successful learning. May be repeated for 3 hours.

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**Elementary Education (ELED)**

**ELEG1001 Introduction to Electrical Engineering (Irregular)** The course will address the nature of the Engineering profession in order to engage in life-long learning. The course will outline the various technical areas encompassed within Electrical Engineering discipline. The course will also emphasize on the history and issues. ELEG1011 Engineering Success and Ethics (Sp) Topics include: how to succeed ethically in the Engineering profession, development of efficient and productive habits in studying, attitude toward group work, respect of educators, active involvement in student societies, safety, legal and
courses are not available. For more information, please contact the university's admissions office.

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Design and application in electrical engineering.
Prerequisite: ELEG 3322 and ELEG 3923.
(Same as ELEG 4403H)

ELEG4071H Honors Electrical Engineering Design II (Sp, Fa) Design and application in electrical engineering.
Prerequisite: ELEG 4061. (Same as ELEG 4071H)

ELEG4071 Electrical Engineering Design II (Sp, Fa) Design and application in electrical engineering.
Prerequisite: ELEG 4061. (Same as ELEG 4071H)

ELEG4203 Semiconductor Devices (Irregular) Crystal properties and growth of semiconductors, energy bands and charge carriers in semiconductors, excess carriers in semiconductors, analysis and design of p-n junctions, and properties of bipolar junction transistors, and analysis and design of field-effect transistors. Prerequisite: MATH 3404.

ELEG4223 Design and Fabrication of Solar Cells (Irregular) Solar isolation and its effect on junction solar cells in dark and under illumination; solar cell parameters efficiency limits and losses; standard cell technology; energy accounting; design of silicon solar cells using simulation; fabrication of designed devices in the lab and their measurements.

ELEG4233 Introduction to Integrated Circuit Design (Irregular) Design and layout of large scale digital integrated circuits using integrated CMOS technology. Topics include MOS devices and basic circuits, integrated circuit layout and fabrication, dynamic logic, circuit design, and layout strategies for large scale NMOS and CMOS circuits. Prerequisite: ELEG 3303.

ELEG4243 Analog Integrated Circuits (Irregular) Theory and design techniques for analog and digital integrated circuits. Current mirrors, voltage to base emitter amplifier, analog precision compensation, linear and amplitude design techniques, circuit simulation using computer-assisted design programs. Prerequisite: ELEG 3323.

ELEG4273 Electronics Manufacturing Processes (Irregular) Introduction to manufacturing processes and concurrent engineering in the electronics industry. Survey of electronics components and products and the processes of fabrication and assembly. Principles of design, productivity, and quality control for the automatic testing systems. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: ELEG 3903 or ELEG 2103.

ELEG4283 Mixed Signal Test Engineering I (Irregular) Overview of mixed signal testing, the test specification process, DC and parametric measurements, measurement accuracy, tester hardware, sampling theory, DRAM based testing, analog chip testing, ATE and channel testing. Prerequisite: senior or graduate standing.


ELEG4293 Switch Mode Power Conversion (Irregular) Basic switching converter topologies: buck, boost, buck-boost, Cuk, flyback, resonant; pulse-width modulation; integrated circuit controllers; switching converter design case studies; SPICE analyses of switching converters; state-space averaging and linearity; and switching converter transfer functions. Prerequisite: ELEG 3223 and ELEG 3103.

ELEG4303 Control Systems (Irregular) Mathematical models of control systems. Performance criteria and stability. Zigler-Nichols, root-locus, and frequency-response design techniques. Special topics. Credit can be for either ELEG 4303 or MEEG 4313. Prerequisite: ELEG 3123. (Same as CENG 4403.MEEG 4213)

ELEG4463L Control Systems Laboratory (Irregular) Experimental study of various control systems and components. The use of programmable logic controllers in the measurement of systems parameters, ladder logic applications, process-control applications, and electromechanical systems. Prerequisite: ELEG 4403.

ELEG4473 Electric Power Distribution Systems (Irregular) Design considerations of electric power distribution systems, including distribution substations, primary and secondary circuits. Distribution transformer and capacitor design; distribution voltage regulation, and distribution system protection. Prerequisite: ELEG 3303.


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including symmetrical component method for unbalanced 3-phase circuits. Introduction to the problems of load flow, fault analysis, and transient stability. Prerequisite: ELEG 3123 or ELEG 3903.

ELEG4523 Introduction to Power Electronics (Irregular) Power electronic systems, power semiconductor switches, passive and active (or switching) filters, and zero-voltage and zero-current switching resonant inverter circuits (e.g., resonant and active-clamp resonant inverters). Prerequisite: ELEG 3123 and ELEG 3223.


ELEG4623 Communication Systems (Irregular) Various modulation systems used in communications. AM and FM fundamentals, pulse modulation, signal to noise ratio, threshold in FM, the phase locked loop, matched filter detection, probability of error in PSK, FSK, and DPSK. The effects of animal noise in digital systems. Information theory and coding. Prerequisite: ELEG 3143.

ELEG4683 Introduction to Image Processing (Irregular) Introduction to the basic concepts of image processing: theory and applications. Covers digital methods of image restoration; reformulation, extraction and analysis. Corequisite: Drill component.


ELEG4723 Introduction to RF and Microwave Design (Irregular) Introduction to microwave design principles. Transmission lines, passive devices, networks, impedance matching, filters, dividers, and hybrids will be discussed in detail. Active microwave devices will also be introduced. In addition, the applications of this technology as it relates to radar and communications systems will be reviewed. Prerequisite: ELEG 3703. (Irregular)

ELEG487V Special Topics in Electrical Engineering (Irregular) (1-3) Consideration of current electrical engineering topics not covered in other courses. Prerequisite: senior standing. May be repeated for 6 hours. ELEG in Electrical Engineering (Irregular) (1-3) Consideration of current electrical engineering topics not covered in other courses. Prerequisite: senior standing. May be repeated for 6 hours.

ELEG4893 Semiconductor Applications (Irregular) (Irregular) Consideration of current electrical engineering topics not covered in other courses. Corequisite: Drill component. Prerequisite: CENG 1123 or CSCE 1123.

ELEG4943 Digital Systems Design (Irregular) Number fundamentals of switching algebra, analysis and design of sequential switching circuits and memory elements. Prerequisite: junior standing.

ELEG4963 Field Programmable Gate Array (FPGA) Laboratory Implementation of digital logic and state machine designs with field programmable gate arrays. Emphasis is on the use of CAD tools for design and synthesis. Corequisite: Lab component.

ELEG4983 Introduction to Computer Architecture (Irregular) Design of a single board computer including basic computer organization, memory subsystem design, peripheral interfacing, DMA control, interrupt control, and bus organization. (Same as CENG4213) Prerequisite: ELEG 3903. (Same as CENG 4213)

ELEG5131 Stochastic Digital Signal Processing Laboratory (Irregular) Use of DSP implementations and test-beds of stochastic DSP systems. Linear prediction, adaptive filters, parametric spectral analysis, and speech applications. Design examples, random signal basics, spectral decomposition, and noise. Prerequisite: ELEG 3133 and ELEG 3143.

ELEG5153 Real-Time Data Acquisition Systems (Irregular) The theory and practice associated with taking measurements of the real world for use with computers. Sampling and data analysis techniques. Prerequisite: ELEG 3903.

ELEG5163 Advanced Microcontroller Design Project (Irregular) Use of development systems as an aid to microcontroller design; the student is expected to design, build, and test a microcontroller-based system to perform a specified task. Corequisite: Lab component. Prerequisite: ELEG 3903.


ELEG5183L Digital Signal Communications Laboratory (Irregular) Implementation of digital communication techniques in the Texas Instruments C30 processors. AM, FM, SSB, DSB modulation: data scramblers, bit error rate, PAM, QAM, echo cancellation, full-duplex modem. Pre- or Corequisite: ELEG 4603.

ELEG5193L Advanced DSP Processors Laboratory (Irregular) Familiarization with, and use of, advanced DSP processors. Parallel processor configurations. Timing consideration, specialized programming techniques, and complex pipelines. Prerequisite: ELEG 5173L.

ELEG5213 Integrated Circuit Fabrication Technology (Irregular) Theory and techniques of integrated circuit fabrication technology. Use of E-beam lithography, growth, chemical vapor deposition, impurity diffusion, oxidation, ion implantation, photolithography and medallization. Design and analysis of device fabrication using SUPREM and SEDAN. In-process analysis techniques. Student review papers and presentations on state of the art fabrication and device technology. Prerequisite: ELEG 4203.

ELEG5223 Solid-State Electronics I (Irregular) Theoretical treatment of crystal structures and lattices, quantum and statistical mechanics, thermophysical properties of crystals, free-electron theory of metals and quantum theory of electrons in periodic lattices. Prerequisite: ELEG 4203 and PHYS 3614 and PHYS 3636.

ELEG5253L Integrated Circuit Design Laboratory I (Irregular) Design and layout of large scale digital integrated circuits. Students design, check, and simulate digital integrated circuits with Mentor Graphics and test them in a C. I. Design Laboratory II. Topics include computer-aided design, more indepth coverage of topics from ELEG 4233, and design of very large scale chips. Prerequisite: ELEG 4233 and ELEG 4203.

ELEG5263L Integrated Circuit Design Laboratory II (Irregular) Students test the I.C. chips they designed in E.C. Design Laboratory I and propose design corrections where needed. Topics include gate arrays, bipolar design, I2L, memory design, and microprocessor design. Prerequisite: ELEG 5253L.

ELEG5273E Electronic Packaging (Irregular) An introductory treatment of electronic packaging, from single chip to multichip, including materials, substrates, electrical design, thermal design, mechanical design, package modeling and simulation, and product development. Prerequisite: ELEG 4233 and ELEG 4203.

ELEG5413 Introduction to Computer Hardware (Irregular) Focus calibration, DAC testing, ADC testing, I/O calibration, Design for Test, Data Analysis, and Test Economics. Prerequisite: ELEG 4283.

ELEG5423L Data Fabrication Laboratory (Irregular) Experimental studies of silicon oxidation, solid-state diffusion, photolithographical materials and techniques, bonding and encapsulation. Fabrication and testing of pin diodes, NPN transistors and MOS transistors. Prerequisite: ELEG 5213.

ELEG5513 Power Semiconductor Devices (Irregular) Carrier transport; graph theory; transistor behavior in semiconductor devices; power bipolar transistors, thyristors, power junction field-effect transistors, power field- controlled diodes, silicon power MOS-MOS devices. Prerequisite: ELEG 5323.

ELEG5523 Semiconductor Nanostructures I (Irregular) This course is focused on the basic theoretical and experimental analyses and applications encountered in semiconductor heterojunctions and nanostructures with emphasis on device applications and innovations. Prerequisite: ELEG 4203 or Instructor Permission. ELEG in Semiconductor Nanostructures II (Irregular) This course is a continuation of ELEG 5523. Prerequisites: ELEG 5523 or Instructor Permission.

ELEG5540 Systems Theory (Irregular) A unified state-space approach to continuous and discrete systems. System dynamics, local transition functions, reachability, observability, and global behavior of systems. Prerequisite: ELEG 4403.


ELEG5542 Optimal Control Systems (Irregular) Basic concepts, conditions for optimality, the minimum principle, the Hamilton Jacobi equation, structure and properties of optimal systems. Prerequisite: ELEG 4133.


ELEG5546 Chaotic Dynamical Systems (Irregular) Computer analysis of fixed and periodic orbits of discrete and continuous dynamical systems. Symbolic dynamics and low dimensional chaos. Application of dynamical systems with applications to convergence analysis of numerical algorithms and secure communications. Fractals with applications to image compression. Julia and Mandelbrot sets. Prerequisites: senior or graduate standing in Engineering, Math or Science.

ELEG5547 Intelligent Transportation Systems (Irregular) Engineering challenges in current surface transportation. The ITS concept. Review of current electrical, communication, and computer technologies. Applications to traffic surveillance, traveler information, traffic management, transit management, incident management, automatic toll collection and smart cars. Benefits to ITS. Prerequisite: senior or graduate standing in engineering.

ELEG5551 Electric Power Quality (Irregular) The theory and analysis of electric power quality for industrial and commercial power systems. Symbolic dynamics; power filter design, grounding, shielding, wire considerations, instrumentation, site surveys and analysis, case studies, specification and selection of power system components, and recommended design and installation practices. Prerequisite: ELEG 3003 and MATH 3404.

ELEG5553 Power Electronics and Motor Drives (Irregular) V1 characteristics of insulated Gate Bipolar Transistors (IGBTs) and MOS Field Effect Transistors (MCTs), design of driver and snubber circuits, induction-, permanent- magnet-, and brushless dc-motor drives; and resonant inverters. Prerequisite: graduate standing or (ELEG 3232 and ELEG 3337).

ELEG5554 Communication Networks for Motion/Industrial Control (Irregular) An introduction to topics of current interest in motion control systems. Examples: Open Control Automation, RS 485 Communication and RS
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ELEG 3143 or ELEG 4623.


ELEG5753 Digital Signal Communications & Navigation Systems (Irregular) Introduces satellite communications and navigation systems designing including microwave transmission, satellite transponders, earthstation hardwarings, mobile communication systems, and satellite networks. Prerequisite: ELEG 3133 and ELEG 3703.

ELEG5763 Advanced Electromagnetic Scattering & Transmission (Irregular) Reflection and transmission of electromagnetic waves from a flat interface, the Poingtyn theorem, the complex and average power, the rectangular wave guides, TE and TM modes, radiation from antennas in free space and introduction to computational electromagnetics. Prerequisite: ELEG 3703.

ELEG5801 Graduate Seminar (Sp, Su, Fa) Papers presented by candidates for the Master of Science degree in electrical engineering on design problems, or new developments in the field of electrical engineering.

ELEG587V Special Topics in Electrical Engineering (Irregular) (1-3) Consideration of current electrical engineering topics not covered in other courses. Prerequisite: permission of instructor.

ELEG5913 Parallel Programming (Irregular) An analysis of parallel computer systems with respect to software engineering. Practical programming experience on pipelined, array, and multi-processor computers. Credit can be earned in only one of these three courses. CSCE 5303 or ELEG 5913. Prerequisite: CSCE 4413 or equivalent.

ELEG5933 CAD Methods for VLSI (Irregular) Introduction to computational methods for the design and implementation of computer aided design (CAD) tools for digital system engineering. The underlying theory of the tools is emphasized in addition to their application. Prerequisite: CENG 4213.

ELEG5943 Computer Arithmetic Circuits (Irregular) Examination of fundamental principles of arithmetic circuits for performing arithmetic operations in computers. This course provides sufficient theoretical and practical information to prepare the digital design engineer with an awareness of basic techniques for the realization of arithmetic circuits. Prerequisites: CENG 4213. (Irregular) May be repeated.

ELEG5963 Computer Systems Optimization (Irregular) Design considerations and performance analysis of computer and communication systems modeling. Prerequisite: CSCE 4513.

ELEG600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

ELEG6213 Semiconductor Surfaces (Irregular) Semiconductor surfaces: Structure and reactivity of the surface, surface space-charge region, surface states, and scanning. Experimental methods, the MOS capacitance vs. voltage technique, current-voltage measurements, and photo-electric emission. Prerequisite: ELEG 5233.

ELEG6233 Solid State Electronics II (Irregular) In-depth theoretical treatment of semiconductor material and devices. Topics to be covered include carrier statistics, transport behavior, bulk material properties, junction characteristics and metal-semiconductor contacts. Prerequisite: ELEG 5233.

ELEG6273 Advanced Electronic Packaging (Irregular) An advanced treatment of electronic packaging covering a diverse range of packaging applications. Topics include packaging tradeoffs and decisions, design and CAD, assembly issues, packaging, discrete and integrated passives, MEMS and optoelectronic packaging, RF and microwave packaging, multipackaging, reliability, and economic considerations. Prerequisite: ELEG 5273. (Same as ELEG 6273.)

ELEG6801 Graduate Seminar (Sp, Su, Fa) Papers presented by candidates for the Doctor of Philosophy degree in electrical engineering on current research or design problems in the field of electrical engineering.

ELEG700V Doctoral Dissertation (Sp, Su, Fa) (1-18)

Environmental Dynamics (ENDY)

ENDY4043 Water Resource Issues (Sp) Human population issues, the quantity and quality of water resources, including impact of agriculture, industrial, and municipal uses, and a comparative policies and water resource development, past and future.

ENDY5023 Digital Remote Sensing (Sp) Theoretical and applied aspects of the manipulation and interpretation of environmental phenomena recorded by digital remote sensing instruments. Emphasis is on techniques of digital image enhancement and transformation, image geocoding and supervised unsupervised classification of multispectral image data from Earth-orbiting platforms. Prerequisite: GEOG 4636 or equivalent.

ENDY5033 Advanced Vector Geographic Information Systems (Irregular) Advanced vector data operations and analysis. Topics will include topological analysis, network analysis, geocoding, contour, implications of source and product map scale, map generalization, error mapping, and cartographic production. Prerequisite: (ANTH 4563 or GEOG 4563) or equivalent.

ENDY5043 GIS Analysis and Modeling (Odd years, Sp) Advanced raster topics are examined with a theoretical and methodological review of Tomlin's cartographic modeling principles. Topics vary and include fourier meth-ods, nonparametric training methods, feature selection, fea-
classifiers, discriminant functions, parametric training meth-
ods, and clustering. Prerequisite: graduate standing.

ENDY5053 Quaternary Environments (Fa) An inter-disciplinary study of the Quaternary Period including dating methods, deposits, soils, climates, tectonics and human adap-
tion. (Same as ENGY 4563 or GEOG 4563.)

ENDY5063 Paleoclimatology (Sp) The earth’s climate history over the last 2 million years and the influence various factors have had on it; compilation and paleoclimatic histories and methods of dating climatic effects. Prerequisite: GEOG 4363 or equivalent.

ENDY5113 Global Change (Fa) Examines central issues of global change including natural and human induced causes, climate change, air pollution, deforestation, desertification, wetland loss urbanization, and the biodiversity crisis. The U.S. Global Change Research Program is also examined. Prerequisite: graduate standing. (Same as GEOG 5113)

ENDY5133 Environmental Site Assessment (Irregular) Principles, problems, and methods related to conducting an environmental site assessment. An applied course covering field site assessment, regulatory documenta-
tion, and reporting preparation. Prerequisite: GEOG 4033. (Same as GEOG 5133)

ENDY5533 Marine Geology (Sp) Geologic principles as applied to the study of the world’s ocean basins. Course includes basic theories and principles of continental margin evolution, coastal geologic processes, and methods of study of deep sea records of global change and paleoceanography. Prerequisite: graduate standing. (Same as GEOG 5533)

ENDY5853 Environmental Isotope Geochemistry (SP) An introduction to principles of isotope fractionation and distribution in environmental systems isotopic analytical methods, and extraction of isotope samples; application of isotopes in characterization of geologic processes and interaction with hydrologic, surficial, and biologic attenu-
atation, paleothermometry soil and biochemical processes. Prerequisite: GEOG 5063 or GEOG 5263. (Same as GEOS 5853)


ENDY6023 Seminar in Environmental Dynamics (Irregular) Seminar examining contemporary topical topics in Environmental Dynamics. Topics will change with each offering. Prerequisite: graduate standing. May be repeated.

ENDY6033 Society and Environment (SP) This course examines the complex interrelationships between human societies and the natural environment. Drawing on diverse and interdisciplinary perspectives in archaeology,
ENGL0003 Basic Writing (Sp, Fa) A required course for first-time entering freshmen whose placement-test scores indicate that they are not prepared for ENGL 1013. Upon the recommendation of the Department of English, students may possibly take this course and transfer to ENGL 1013 as the result of further testing during the first week of classes. Credit earned in this course may not be applied to the total required for a degree.

ENGL1013 Honors Composition I (Fa) A course for freshmen with high placement scores. (Same as ENGL 1013,ENGL 1013H)

ENGL1013 Composition I (Sp, Su, Fa) Required of all freshmen unless exempted by the Department of English. Prerequisite: is an acceptable score on the English section of the ACT or another approved test. (Same as ENGL 1013H,ENGL 1013I)

ENGL2023H Honors Composition II (Sp) Continuation of ENGL 1013H. (Same as ENGL 2023,ENGL 2023H)

ENGL1013T English Transfer Course (Sp, Su, Fa) Designed to improve reading comprehension, writing, and knowledge of the operations of language. Also includes study of how words have been utilized in the past, study of patterns of word formation, and study of lexicography. Some attention given to pronunciation and spelling. Not a remedial course. (Same as ENGL 1151I)

ENGL1151 Restricted English to Literature (Fa) Approaches to reading and writing about fiction, drama, and poetry at the college level.

ENGL2003 Advanced Composition (Sp, Su, Fa) Remedial course in English composition. Required of all candidates for bachelor's degree unless exempted by examination or by credit in ENGL 1013 or by grade of at least a "B" in ENGL 1013 and a grade of "A" in ENGL 1023 at the University of Arkansas, Fayetteville. Not to be taken before the second semester of the sophomore year; must be taken prior to the last semester before graduation. Cannot be counted toward a major in English. Prerequisite: ENGL 1013 and ENGL 1023. (Same as ENGL 2003)

ENGL2013 Essay Writing (Sp, Su) Prerequisite: ENGL 1013 and ENGL 1023. (Same as ENGL 2013A)

ENGL2023 Creative Writing I (Sp, Fa) Beginning level workshop course in which students write original poems and stories. Bearing and detailed discussion of poems and stories in anthologies is required. Designed to teach the student the fundamental techniques of fiction and poetry. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2133 History of Literature in English I (Sp, Su, Fa) A critical and historical survey of the development of literature in English from its beginnings to the Restoration period. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2143 History of Literature in English II (Sp, Su, Fa) A critical and historical survey of the development of literature in English in both Great Britain and the United States, from the Restoration to the rise of Romanticism. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2153 History of Literature in English III (Sp, Su, Fa) A critical and historical survey of the development of literature in English, in both Great Britain and the United States, from Romanticism to Modernism. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2163 History of Literature in English IV (Sp, Su) A critical and historical survey of literature in English from Modernism to the present, including literature from England, Great Britain and the United States. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2303T English Transfer Course (Sp) Survey of English Literature from the Colonial Period to 1900. A survey of American writers from 1492 to 1900. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2313 Survey of English Literature from 1700 to 1900 (Sp, Fa) A critical and historical survey of the development of literature in the British Isles from its beginnings to the end of the seventeenth century. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2323 Survey of Modern British, Irish, and Postcolonial Literature (Sp, Fa) A survey of modern literature in English written in Great Britain, Ireland, Asia, and the Caribbean. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2343 Survey of American Literature from the Colonial Period through Naturalism (Sp, Fa) A survey of American writers after 1492. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL3013 Creative Writing II (Sp, Fa) Laboratory course for students who wish to attempt original work in the various literary forms. Prerequisite: ENGL 2023 or equivalent. (Same as ENGL 3013)

ENGL3050 Technical and Report Writing (Sp, Fa) Intensive practice in such types of writing as processes, descriptions of mechanism, abstracts, and laboratory and research reports. The criteria for effective written exposition in the sciences, including agriculture and engineering.

ENGL3113 Folklore (Irregular) Popular literature (ballads, folktales, etc.). Prerequisite: junior standing.

ENGL3123 Folk and Popular Music Traditions (Irregular) Explores the development of music in the Americas. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL3131 Introduction to Linguistics (Irregular) Introduction to language study with stress upon modern linguistic theory and analysis. Data drawn from various languages reveal linguistic universals as well as phonological, syntactic, and semantic systems of individual languages. Related topics: language history, dialectology, language and its relation to culture and society, the history of linguistic scholarship. Prerequisite: junior standing. (Same as ANTH 3173,COMM 3173,FLAN 3173)

ENGL3183 Modern English Syntax and Style (Sp) Structure of modern English since 1500 to the present. Prerequisite: ENGL 1013 and ENGL 1023.

ENGL3193 History of the English Language (Fa) Introduction to the English language and its vocabulary from Anglo-Saxon times to the present.

ENGL3203 Poetry (Sp, Fa) A critical introduction to the genre.

ENGL3213 Fiction (Sp, Fa) A critical introduction to the genre.

ENGL3223 Drama (Sp) A critical introduction to the genre.

ENGL3283 Topics in Popular Culture and Popular Genres (Irregular) Survey of a broad topical area related to literature and culture but not otherwise encompassed by the curriculum. Content varies. May be repeated. May be repeated for 9 hours.

ENGL3293H Honors Colloquium (Irregular) A course designed primarily for undergraduates. Extensive reading in Chaucer's major works. Course designed primarily for undergraduates. For advanced students. Gives close attention to individual manuscripts in a workshop environment.

ENGL3333 British Short Story (Irregular) Survey of the British short story in the nineteenth and twentieth centuries, with emphasis on the major writers. Prerequisite: ENGL 3343.

ENGL3413 Undergraduate Independent Study (Irregular) Undergraduate original research and writing. Prerequisite: 'B' average and two-thirds (21 hours or regular requirements for English major completed).

ENGL3423 American Film Writing Workshop (Irregular) A survey of major American genres, major directors, and films that have influenced the development of motion pictures. (Same as COMM 4143)

ENGL4213 Senior Research Seminar (Irregular)
ENGL4503 Introduction to Literary Theory (Irregular) A historical survey of literary theory from Plato onwards.

ENGL4513 Studies in Literary Criticism and Theory (Irregular) A study of contemporary trends in literary criticism. Emphasis will be placed on engaging the practices of a particular theory. Content varies. May be repeated. May be repeated for 9 hours.

ENGL4533 Studies in Literature and Gender (Irregular) The study of a special topic involving literature and gender. Content varies. May be repeated.

ENGL4543 Studies in Multiculturalism (Irregular) The study of literature and multiculturalism, with attention to particular themes, genres, authors, literary movements, historical moments, or other organizing principles. At least one major paper will be required. Content varies. May be repeated.

ENGL4563 Topics in Major Authors (Irregular) The concentrated study of works by one or more major authors. At least one major paper will be required. Content varies. May be repeated.

ENGL4573 Studies in Major Literary Movements (Irregular) This course focuses on the literature either of a major literary movement such as Romanticism or Modernism, or of a specific topic such as utopianism in twentieth-century writing. Content varies. May be repeated. May be repeated for 9 hours.

ENGL4603H Special Studies (Irregular) Concentrated study of a specific topical area related to literature and culture but not otherwise encompassed by the curriculum. Content varies. May be repeated.

ENGL5003 Composition Pedagogy (Fa) Introduction to teaching college composition. Designed for graduate assistants at the University of Arkansas.

ENGL5013 Creative Writing Workshop (Irregular) Concentrated study of a specific topical area related to literature and culture but not otherwise encompassed by the curriculum. Content varies. May be repeated. May be repeated for 3 hours.

ENGL5034 Translation Workshop (Irregular) Problems of translation and the role of the translator as both scholar and writer/translator; involves primarily the discussion of a particular literary text, and the translation of original text into English. May be repeated. May be repeated for 15 hours.

ENGL5063 Internship in Publishing (Irregular) Practical experience and instruction in copyediting and style/typography, promotion, and production. Conducted at the University of Arkansas Press and designed for students who plan careers in publishing. May be repeated for 6 hours.

ENGL507V Creative Non-Fiction Workshop (Irregular) The theory and practice of the "New Journalism" with a study of its antecedents and special attention to the use of "fictional" techniques and narrative point of view to make very vivid the account of real people and real events.

ENGL5083 Professing Literature (Irregular) An introduction to the profession of literary scholarship and the teaching of literature at the college level.

ENGL510V Readings in English and American Literature (Irregular) An opportunity to Honor candidates and graduate students. May be repeated for 99 hours.

ENGL5143 English Teachers’ Workshop: Literature (Irregular) Open to honors candidates and graduate students. May be repeated for 99 hours.

ENGL5173 Studies in Medieval Literature and Culture (Irregular) An intensive study of many different literary movements; intensive study of representation works from each genre.

ENGL5183 The Structure of Present English (Sp) Structural analysis of the language.

ENGL5203 Introduction to Graduate Studies (Irregular) Students learn to carry out and report on literary research. Topics include introduction to the reference collections, professional journals, and microform texts with which scholars work. Meanwhile, advanced explanation and composition exercises work on perfecting the students' control over the design and style of the articles they write.

ENGL5223 Studies in Renaissance Literature and Culture (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL5233 Form and Theory of Translation (Irregular) An examination of the principal challenges that confront translators, including the recreation of style, dialect, ambiguities, and formula poetry; vertical translation; translation where multiple manuscripts exist; and the question of how literal a translation should be. (Same as WLT 5230)

ENGL5243 Special Topics (Irregular) Designed to cover subject matter not offered in other courses. May be repeated for 9 hours.

ENGL5263 Form and Theory of Fiction: I (Irregular) Such aspects of the genre as scene, transition, character, and conflict. Discussion is limited to the novel. May be repeated. May be repeated for 12 hours.

ENGL5293 Form and Theory of Poetry: II (Irregular) Second part of the study of the techniques of poetry; independent study of a poet or a problem in writing or criticism of poetry. Prerequisite: ENGL 5263.

ENGL5303 Seminar in Restoration and Eighteenth-Century British Literature and Culture (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL5313 Introduction to Literary Theory (Irregular) An advanced introductory survey of a number of theoretical approaches to literature.

ENGL5403 Studies in Nineteenth-Century British Literature and Culture (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL5603 World Literature and Culture in English (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL5623 The Bible as Literature (Irregular) The Bible as literature; the Noahic covenant; Israelite and Judeo-Christian traditions; the New Testament; and the influence of the Bible on English literature. May be repeated. May be repeated for 12 hours.

ENGL5624 Seminar in Language and Literature Before 1900 (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL5953 Doctoral Dissertation (Sp, Su, Fa) (1-6)

ENGL5993 Seminar in Popular Culture and Popular Genres (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6943 Seminar in Literary Theory (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6953 Seminar in Literary History (Irregular) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL700V Doctoral Dissertation (Sp, Su, Fa) (1-6)
Environmetal Science (ENSC)

ENSC1003 Environmental Science (Fa) Series of lectures and discussions introducing the topic of environmental science. Prerequisite: CSES 2203. A study of factors related to water, soil, and air quality. May not be taken for natural science credit by students in Friburg College. (Same as ENSC 1003)

ENSC1003 Environmental Science (Fa) Series of lectures and discussions introducing the topic of environmental science including factors related to water, soil, and air quality. May not be taken for natural science credit by students in Friburg College. (Same as ENSC 1003)

ENSC2203 Soil Science (Sp, Fa) Origin, classification, and physical, chemical, and biological properties of soils. Lecture 3 hours, discussion 1 hour per week. Corequisite: CSES 2201L and Drill component. Prerequisite: CHEM 1103 or CHEM 1104. (Same as CSES 2203)

ENSC3003 Introduction to Water Science (Fa) Properties, occurrence, and description of the types, functions, quality and quantity, potential contaminants, uses, and guiding policies and regulations of the various water resources in the environment. Prerequisite: ENGL 1023 and ENSC 1003 or CHEM 1053 or GEOL 1113 or higher or BIOL 1545. (Same as CHEM 1003)

ENSC3103 Plants and Environmental Restoration (Odd Years, Fa) Selection, establishment, and use of plants to promote soil stabilization, water quality, and wildlife habitat. Principles and practices of managing plants for soil remediation, nutrient management, and sediment trapping, and restoration of plant communities. Prerequisite: CSES 1203 or HORT 2003 or BIOL 1613.

ENSC3221L Ecosystems Assessment Laboratory (Even Years, Fa) The purpose of this laboratory is to complement concepts learned in lecture by carrying out experiments that familiarize students with methods used in soil and aquatic ecology. Students will collect samples, analyze and interpret data obtained from soil and water samples. Lab will meet once per week for 3 hours. Corequisite: ENSC 3223.

ENSC3223 Ecosystems Assessment (Even Years, Fa) Application of ecological principles for ESWS majors and college students interested in environmental science. Applications of the basic ecological principles of organisms, population dynamics, ecosystems, and systems to gain an appreciation for how large scale patterns in terrestrial and aquatic ecosystems are influenced by small scale interactions among individuals (microorganisms to invertebrate macrofauna) and between individuals and the environment. Lecture 3 hours per week. Corequisite: ENSC 3221L. Prerequisite: BIOL 1543, CSES 2203, and ENSC 3003.

ENSC3253 Septic Systems (Odd Years, Sp) An overview of the need for and function of standard and alternative septic systems as well as the rules and regulations that impact septic system design and installation. (Same as CVEG 3253). Recitation 3 hours per week. Prerequisite: CVEG 2003 or CVEG 3215. (Same as CVEG 3253)


ENSC3413 Principles of Environmental Economics (Sp) An introductory, issues-oriented course in the economics of the environment. What is involved in society making decisions about environmental quality will be studied. Environmental issues important to the State of Arkansas and the United States will be emphasized. (Same as AGEC 3413). Prerequisite: AGEC 1103 or ECON 2023.

ENSC3803 GIS for Environmental Science (Odd Years, Fa) Lecture 3 hours, lab 1-4 hours. Prerequisite: CSES 2203. The use of the GIS techniques in solving practical environmental and agricultural land use problems. Areas include: 1) an introduction to spatial variability in soils with an emphasis on the application of GIS technology to understand relationships among spatial parameters important to different land uses, and 2) development of individual experience in the use of GIS in solving environmental and agricultural problems using an oral and written term project. Prerequisite: CHEM 1103 or CHEM 1104. (Same as AGEC 3813)

ENSC3933 Environmental Ethics (Odd Years, Sp) The course addresses ethical questions about nature and the natural environment. Topics of discussion include anthropocentric and biocentric ethics, population control, obligations to future generations, animal rights, moral consideration, Leopold’s land ethic, deep ecology, and feminism. Lecture/discussions 3 hours per week. (Same as PHIL 3113). Prerequisite: ENSC 1003 or PHIL 2003 or PHIL 2103.

ENSC4000 Special Problems (Sp, Su, Fa) Lecture 1-3 hours. Work on special problems in environmental science related or field may be repeated for 8 hours.

ENSC4023 Water Quality (Fa) Physical, chemical, and biological characteristics of natural waters (rain, river, lake, soil, ground, etc.), Discussion of water quality parameters such as pH, alkalinity and acidity, redox, hardness, BOD, TSS, etc. Aquatic processes of pollutants and principles of modeling. Laboratory experiences in water sampling, measurements of water quality parameters, and instrumentation. Corequisite: Lab component. Prerequisite: CHEM 1123 and CHEM 1121L.

ENSC4034 Analysis of Environmental Contaminants (Even Years, Sp) Methods of analysis for inorganic and organic contaminants, radionuclides and microorganisms in soil and water. Quality assurance and quality control, sampling protocols, sample handling, instrumentation and data analysis. Lecture 2 hours and laboratory 4 hours per week. Co-Req: Lab component. Prerequisite: CSES 2203 and ENSC 3003.

ENSC404V Special Topics (Irregular) (1-3) Studies of selected topics not available in other courses. May be repeated for 12 hours. Corequisite: Lab component. Prerequisite: ENSC 400V.

ENSC4053 Septic Systems (Odd years, Sp) study of the behavior of pesticides, toxic organic compounds, and pathogenic microorganisms in the soil/plant/water continuum. Lecture 3 hours per week. Corequisite: CSES 3214.

Entomology (ENTO)

ENTO1023 Insects and People (Sp) Appreciation of the insects and the role they play in an agricultural/farming society. May not be taken for ENTO 3013. Biological, historical, social, economic, cultural, and medical aspects of insects are discussed. Emphasizes appreciation of entomology and employment opportunities in the field. Lecture 2 hours and laboratory 3 hours per week. Corequisite: ENTO 3013. Corequisite: Lab component. Prerequisite: BIOL 1543 and BIOL 1541L.

ENTO1031L Field and Laboratory Studies in Entomology (Sp) A systematic survey and identification of insects and other arthropods occurring in woodland, aquatic and agricultural environments with emphasis on identification and observation of insects in their natural settings. Laboratory 2 hours per week. Corequisite: ENTO 1023.

ENTO3013 Introduction to Entomology (Fa) Fundamental concepts in biology and identification of insects; typical procedures in control of representative species. Insect collection required. Lecture 2 hours, laboratory 2 hours a week. Suggested prerequisites: BIOL 1543 and BIOL 1541L. Corequisite: ENTO 1013. Corequisite: Lab component. Prerequisite: BIOL 1543. (Same as CVEG 3013).

ENTO4000V Special Problems (Sp, Su, Fa) Lecture 3 hours per week. Corequisite: Lab component. Prerequisite: ENTO 3013. Insect Behavior and Chemical Ecology (Even Years, Sp) Basic concepts in insect senses and patterns of behavioral responses to various environmental stimuli. Previous knowledge of basic entomology is helpful, but not required. Lecture 2 hours, laboratory/discussion 2 hours per week. Corequisite: Lab component. Prerequisite: ENTO 4024. (Same as CVEG 4013).

ENTO4033 Immature Insects (Even years, Sp) Identification of immature forms of insects and their phylogenetic relationships. Lecture 1 hour per week. Laboratory 2–2 hour sessions per week. Corequisite: Lab component. Prerequisite: ENTO 4024.

ENTO4043 Apiculture (Odd years, Sp) Review of social behavior of insects and their exemplification in Honeybees. Previous knowledge of basic entomology is helpful but not required. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: ENTO 4043.

ENTO4053 Insect Ecology (Even Years, Fa) To develop understanding of important ecological concepts through study of insect communities; relationships among insects and their environment. To become familiar with the literature of insect ecology, and interpretation and critique of ecological research. Previous knowledge of basic entomology and/or ecology will be helpful. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: ENTO 410V. Special Topics (Irregular) (1-3) Special Topics course available to both undergraduate and graduate students, to address emerging issues and timely topics. This course would supplement our graduate-only special topics course. May be repeated for credit.

ENTO4121 Insect Pest Management I (Odd years, Sp) Study of principles and concept of insect pest management. Areas covered include survey of arthropod pests and damage, population dynamics, damage thresholds, physiological units, prediction models, risk assessment, sampling, strategies and tactics utilized to maintain pest populations below economic injury levels. Prerequisite: ENTO 3013.

ENTO4133 Advanced Applied Entomology (Even years, Fa) A study of the major insects of pest, medical, and college students interested in environmental science.}

Environmental Design (ENVD)

ENVD1301 Orientation in the Design Studio Experience (Su) Four-day intensive design studio experience designed to acquaint prospective design majors with the process of studio design. Design project and jury, lectures. For the general student.

ENVD4853 Urban Planning and Practice (Irregular) Introduction to the theory and practice of contemporary urban planning; emphasis upon the understanding and applications of urban planning as an interdisciplinary and interactive process necessary to the preparation of comprehensive land use plans and plan implementation, study through readings, development, resolution of urban change dynamics and impact of decision making. Credit cannot be received for both CVEG 4853 and ENVD 4853.
EDV4863 Public Design and Planning Determinants (Irregular) Introduction to land use theory, planning, and private development devices used in management of change within community; explanation of tools and techniques of land use control such as zoning, subdivision regulations, capital improvement programs, transportation, and citizen participation.

EDV4883 Design and Human Behavior (Irregular) An advanced-level course investigating behavioral, social, and cultural factors and their implications for the design of buildings, the physical environment; relationship of basic behavioral and social concepts to theory of environmental design through seminar and case study.

Course Descriptions

ETEC2001 Educational Technology (Sp, Su, Fa)
A criterion-based course designed to provide beginning technology users with conceptual knowledge and skills in the area of fundamental computer technology and traditional educational media. Grades are determined by total points earned on successful completion of identified course projects, unit quizzes, and a proficiency final examination.


ETEC5062 Teaching and Learning with Computer-based Technologies (Su) Provides students with a foundation of theories and knowledge needed to use computer-based teaching technologies to meet instructional objectives in content area classrooms. Prerequisite: ETEC 2003.

ETEC5063 Practicum in Educational Technology (Irregular) Provides practical experiences in educational technology. Prerequisite: graduate standing and 15 credit hours completed in educational technology. Prerequisites: I.E.T., 5 credit hours,

ETEC5103 Instructional Systems Analysis and Design (Irregular) A basic level instructional analysis and design course. Students demonstrate knowledge of specific behavioral, social, and cognitive learning strategies that significantly influence the analysis, design, and evaluation of instructional technology products. Prerequisite: graduate standing.

ETEC5183 Internet in the K-12 Classroom (Irregular) This course prepares teachers to be informed consumers of Internet technology; plan appropriate and effective Internet activities for their learners; and understand their responsibilities regarding electronic media, communications, and the Internet in the classroom. Prerequisite: graduate standing.

ETEC5203 History & Systems of Instructional Technology (Sp, Su, Fa) Provides learners with a comprehensive survey of the major trends, issues, people, processes, and products that have significantly affected the evolution of instructional technology.

ETEC5213 Introduction to Educational Media (Sp, Su, Fa) Instruction in selecting, utilizing and evaluating instructional materials and equipment. Prerequisite: graduate standing.

ETEC5233 Teaching Educational Technology (Fa) Provides practical experience in teaching educational courses. Prerequisite: graduate standing.

ETEC5312 Instructional Design Theory & Models (Fa) A study of the instructional development process as it pertains to the design and production of instructional materials which use modern technologies. Goal analysis, objective formulation, instructional strategy development, production of an educational product, and revision of the instructional materials are considered. Prerequisite: graduate standing.

ETEC5323 Information Technologies in Education (Irregular) An intensive examination of the role of telecommunications and distance education technologies and their implications for educational practice. Emphasis is on telecommunications and distance education technologies in classroom environments.

ETEC5263 Grant Writing in Instructional Technology (Sp, Su, Fa) Students will have an opportunity to find grant funding sources, write a grant, and submit an actual grant proposal to an agency for consideration. Will survey research in instructional media over the past 60 years and learn specific criteria for reading and evaluating research reports and articles. Will investigate current issues and topics related to research and grant writing in instructional media.

ETEC5273 Advanced Educational Media (Su, Fa) Instruction in the planning and local production of instructional materials. Prerequisite: ETEC5213.

ETEC52 BV Field Experiences in Educational Technology (Irregular) Provides field experience in educational technology settings. Prerequisite: graduate standing and 6 hours of graduate work in educational technology.

ETEC5293 Critical Evaluation of Educational Films (Su) A comprehensive survey of the major assessment films with emphasis on the selection and evaluation process. Appropriate for media specialists, curriculum supervisors, librarians, administrators, classroom teachers and others involved in the purchasing, selection and/or utilization of educational films. Prerequisite: ETEC 5213 or equivalent.

ETEC5303 Learning with Computers in K-12 Classrooms (Irregular) This course is a study of how technology can be used to support current theories of learning. Students enrolled in the course will be required to learn about various learning theories and technologies as well as develop projects that utilize technology and current learning theories. Prerequisite: graduate standing.

ETEC5313 Principles in Visual Literacy (Sp, Su, Fa) Provides participants with a sense of how visual images can be employed in the teaching process. The use of black and white photographs, videos, and color slides are vehicles for studying the use of visual images in education.

ETEC5323 Computers as an Instructional Technology (Irregular) A comprehensive survey of the issues and processes involved in the creation and evaluation of computer courseware for educational purposes. Emphasis is given to instructional design principles as they relate to computer technology.

ETEC5333 Teaching on the Internet (Irregular) This course illustrates the issues and processes involved in the creation, administration, and maintenance of online course materials. Emphasis is placed on the acquisition of knowledge concerning online instruction, the quality of instruction materials produced, and the ability to work with and teach a faculty member about online instruction.

Prerequisite: graduate standing and Web Development Experience.

ETEC5343 Assessment & Evaluation in Instructional Technology (Sp, Su, Fa) Provides learners with comprehensive survey of the major assessment and evaluation techniques used in the system design and evaluation. Techniques range from needs assessment through summative evaluation.

ETEC5353 Production of CD ROM Media (Irregular) This course illustrates the processes involved in the creation and production of multi-media CD-ROM project. It provides students with the experience of collaboratively designing, developing, and producing a large scale multi-media CD-ROM project. Emphasis is placed on teamwork, quality of instructional materials produced, and the utilization of various technologies. Prerequisite: ETEC 5273. May be repeated for 3 hours.

ETEC5363 Distance Learning (Irregular) This course covers important aspects of the distance learning course design and teaching. The course will link theory to practice by investigating technology and research that undergirds practice, examining and analyzing current practice, proposing practice standards, and discussing issues related to learners in distance education environments. May be repeated for 3 hours.

ETEC5373 Introduction to Web Design (Irregular) This course covers the important aspects of the web design process as carried out in many educational environments. The course will include library practice, exam-ination and analysis of current practice, practice of practice standards, and discussion of issues related to learners in this new medium. May be repeated for 3 hours.

ETEC5383 Issues in Web Design (Fa) This course covers important aspects of the Web design process as carried out in many educational environments. In this seminar we will be focusing on nonprofit educational environments. The course will involve theory to underlying practice, examination and analysis of current practice, practice of practice standards, and discussion of issues related to learners in nonprofit settings. Prerequisite: graduate standing.

ETEC5600 Workshop (Irregular) (1-18) This course is designed to enhance the educational technology curriculum by providing students with special topic content and classroom experiences under the guidance of a faculty member. Prerequisite: graduate standing. May be repeated for 6 hours.

ETEC599V Seminar (Irregular) (3-6) This course is designed to enhance the established educational technology curriculum by providing students with special topic content and classroom experiences under the guidance of a faculty member. Prerequisite: graduate standing. May be repeated for 6 hours.

ETEC600V Master’s Thesis (Sp, Su, Fa) (1-6) ETET560V Special Problems in Educational Technology (Sp, Su, Fa) (1-6) Individually designed and conducted studies of educational technology under the guidance of a faculty member. May be repeated for 6 hours.

ETEC6223 Strategic Planning and IDT Programs (Sp, Su, Fa) This course addresses and readings and experiences intended to develop strategic planning, knowledge, values, attitudes, and skills in future instructional design and technology leaders.

ETEC6253 Information Technologies in Education (Irregular) An intensive examination of the role of telecommunications and distance education technologies and their implications for educational practices. Emphasis is on techniques of development, utilization and evaluation of telecommunication and distance education technologies in classroom environments. Prerequisite: ETEC 5213.

ETEC5393 Issues and Trends in Instructional Design and Technology (Irregular) Critical challenges posed as a result of the increasing infusion of technology into the school and training environments are explored. The course prepares students to make and defend policy decisions and become conversant with current trends and issues in the field.

Prerequisite: ETEC 5213.

ETEC599V Seminar (Irregular) (1-6) The seminar is designed to provide advanced graduate students with an opportunity to explore topics related to instructional design in educational and training environments. Prerequisite: graduate standing.

European Studies (EUST)

EUST2013 Introduction to Europe (Fa) This course will cover the basic physical and human geography of Europe, emphasizing the factors that tie Europe together as well as the diversity of environmental and cultural conditions in the region. The class will focus particularly on those countries that are current members of the EU and on possible future candidates.

EUST399VH Honors Thesis (Sp, Su, Fa) (1-6) May be repeated for 6 hours. Prerequisite: junior standing. May be repeated for 6 hours.

EUST4003H Honors European Studies Colloquium (Sp) (Same as EUST 4003) May be repeated for 3 hours.

EUST4003 European Studies Colloquium (Sp) An interdepartmental colloquium with an annual change in subject of investigation, required of students in the European studies program. Prerequisite: sophomore standing. (Same as EUST 4003H) May be repeated for 6 hours.

EUST470VH Honors Special Topics (Irregular) (1-6) An examination of pertinent issues in Europe. (Same as EUST 470V) May be repeated for 99 hours.

EUST470V Special Topics (Irregular) (1-6) An examination of pertinent issues in Europe. (Same as EUST 470V) May be repeated for 99 hours.

Extension Education (EXED)

EXED3023 An Introduction to the Cooperative Extension Service (Irregular) Development of the Extension Service as a part of the Land-Grant College system, its organization, personnel and services. (Same as Extension Service in agriculture and human environmental sciences.

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Food Science (FDSC)

FDSC1011 Food Science Orientation (Fa) Introduces food science as a unique program offering exciting career opportunities. This course emphasizes the importance of science in processing and preservation of food and discusses current topics and issues. Provides sound basic information on food constituents, additives, labeling, environmental issues, food regulations, and food safety. Lecture 2 hours per week for 8 weeks.

FDSC1103 Introduction to Food Science (Sp) This course is designed to provide students with a general introduction to the current status and trends of current issues associated with food products and food ingredients. Discussions will focus on controversial subjects involving food products, food additives, food safety and preservation techniques based on scientific principles and popular belief. Lecture/discussions/demonstrations, 3 hours per week.

FDSC2503 Food Safety and Sanitation (Fa) Principles of sanitation, cleaners and sanitizers, sanitary equipment, and food processing programs. Discussion of food and microbial growth and control in food processing operations. Lecture/discussion/demonstrations, 3 hours per week.

FDSC3103 Principles of Food Processing (Even years, Fa) The course is designed as an overview of the unit; food processing operations common to all types of food processing plants. Examples will be drawn from international food processing operations processing fresh, vegetables, poultry, and meats, oils and fats and milk. Emphasis is on student learning principles of food processing operations and includes strengthening students' written communications and critical thinking skills. Corequisite: Lab component. Prerequisite: FDSC 2503.

FDSC353 Introduction to Food Engineering Principles (Sp) Web-based course designed to give students a perspective of how engineering principles are used in food processing. The student will be introduced to the application of food engineering principles to real-world food processing situations. Students will develop an understanding of the basic principles of the chemistry, fluid flow, heat transfer, and thermal processing. Prerequisite: MATH 1285 or equivalent and/or consent of instructor.

FDSC400V Special Problems (Sp, Su, Fa) (1-4) Investigation of problems in food science. Prerequisite: junior standing.

FDSC4011 Undergraduate Seminar (Sp) Open to all food science majors. Prerequisite: upperclassstanding.

FDSC4114 Food Additives (Sp, Su, Fa) Methods of analysis, instrumentation, and laboratory techniques for the determination of chemical composition of raw and value-added products. Lecture 3 hours, laboratory 3 hours per week. Corequisite: CHEM 1123 and CHEM 1123L and CHEM 2613 and CHEM 2613L or (CHEM 3603 and CHEM 3601L).

FDSC4124 Food Microbiology (Sp) Microbiology, contamination, preservation, and spoilage of different kinds of foods, food poisoning, sanitation, control, and inspection; microbiology of water; and standard methods for official and public health laboratories. Lecture 2 hours, laboratory 4 hours per week. Corequisite: Lab component. Prerequisite: BIOL 2013 and BIOL 2011L and CHEM 1123 and CHEM 1123L (Same as BIOL 4124).

FDSC4253 Quality Evaluation and Control (Even years, Fa) Discussion of the role and importance of standards of quality by chemical, physical, and sensory techniques. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: CHEM 1123 and CHEM 1123L and CHEM 2613 and CHEM 2613L or (CHEM 3603 and CHEM 3601L).

FDSC4225 Risk Analysis for Biological Systems (Odd years, Fa) Principles of risk assessment including exposure assessment and dose response, and risk management. Methods of risk analysis modeling and simulation with applications of risk analysis in animal feed, food, and environmental systems. Prerequisite: STAT 2023 (or STAT 2303 or AGST 4023) and BENG 1022. (Same as BIOS 4223).

FDSC4304 Food Chemistry (Fa) Water, carbohydrates, lipids, proteins, vitamins, and minerals in foods; biochemical and functional properties, enzymes, food additives (emulsifiers, pigments, colors, flavors, preservatives, and sweeteners) and their role in food properties in food systems and during processing. Lecture 3 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: CHEM 1123 and CHEM 1123L and CHEM 2613 and CHEM 2613L or (CHEM 3603 and CHEM 3601L).

FDSC431V Internship in Food Science (Sp, Su, Fa) (1-4) The Food Science Internship is a supervised practical work experience with a food industry, research program or government agency to gain professional experience and insight into career opportunities. A maximum of 4 hours credit is allowed for degree credit. Prerequisite: Junior standing and consent of graduate credit; completion of first year of graduate studies and consent of major professor.

FDSC4413 Sensory Evaluation of Food (Odd years, Fa) Principles and procedures for sensory evaluation of food. Attention is given to sensory systems, sensory test methods, and the effects of factors like psychophysical, health, and cultural factors, and sensory detection. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: STAT 2033 or WOBC 1033 or AGST 4023 or STAT 2023 or PSYC 2013.

FDSC4713 Food Product and Process Development (Odd years, Sp) Multidisciplinary approaches for developing new food products and processes; in the context of an industry-sponsored project. Group dynamics and interpersonal skills. Factors that influence product and process development. Analysis and modeling applied to food processing. Lecture 2 hours and laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: Junior standing. Food Science majors only or consent.

FDSC472V Special Topics in Food Science (Irregular) (1-4) Discussion focused on selected topics of particular fields of raw product physiology, food processing, chemistry, physiology, microbiology, evaluation, sensory analysis, and processing. May be repeated for 4 hours. Corequisite: Lab component. Prerequisite: MATH 1213, PHYS 2013, and PHYS 2011L.

FDSC4823 Principles of Food Microbiology (Fa) The doctoral program in food science is an interdisciplinary program offered by the departments of Food Science, Animal and Poultry Sciences, and Human Environmental Sciences. Prerequisite: graduate standing.

FDSC5602 V General Microbiology (Odd years, Fa) Emphasis is on the relationship between microorganisms and living systems. Lecture-discussion 3 hours per week. Corequisite: CHEM 3613.

FDSC5703 Fermented Foods (Odd years, Fa) Examination of factors influencing the fermentation of food and beverage, and methods to control the microbiological stability and quality of these products. Lecture/discussion 3 hours per week. Prerequisite: CHEM 3813 and FDSC 4124.

FDSC600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

FDSC602V Special Topics (Irregular) (1-3) Discussions focused on selected topics of particular fields of raw product physiology and food processing. Emphasis is on laboratory and field training. Lecture/discussion 3 hours per week. Prerequisite: CHEM 3613.

FDSC6123 Food Carbohydrate Chemistry (Odd years, Sp) Focus is on carbohydrate chemistry including molecular structures and physical properties, production and food applications, analytical methods for food carbohydrates and interactions among food polysaccharides. Prerequisite: FDSC 4304.

FDSC6133 Food Lipid Chemistry (Even years, Fa) Chemistry and technology of commercial fats and oils in foods systems with discussion of lipid changes affecting food quality and human health. Prerequisite: FDSC 4304 and FDSC 4114.

FDSC6533 Food Protein Chemistry and Functionality (Odd years, Fa) This course is a study in advanced food protein chemistry, including molecular structures, characterization, physicochemical bases of food protein functionality, structure-function relationship, processing technologies to improve functionality, as well as hands-on experiences with timely, practical projects related to food proteins. Lecture and problem solving projects for 3 hours per week. Pre- or corequisite: FDSC 4304.

FDSC700V Doctoral Dissertation (Sp, Su, Fa) (1-6) The doctoral program in food science is an interdepartmental program offered by the departments of Food Science, Animal and Poultry Sciences, and Human Environmental Sciences. Prerequisite: graduate standing.

Fulbright Institute Int Rel (FIIR) FIIR2813 Introduction to International Relations (Sp, Fa) Introduction to the international system, theories of international behavior, political economy, conflict and peacemaking, the third world, international law and organizations, and the nature of the post-Cold War world. (Same as PLSC 2813)

FIIR4002 International Relations Seminar (Fa) The capstone course in international relations involves intensive study of major global trends and issues. Students choose a research project culminating in a senior thesis to meet the College writing requirement. Prerequisite: FIIR 2813 or PLSC 2813.

Finance (FINN) FINN3003 Personal Financial Management (Sp, Fa) Topics covered include budgeting, financial planning, managing credit, taxes, insurance, investments, and retirement planning.

FINN3013 Financial Analysis (Sp, Su, Fa) Focuses
on how information contained in financial statements can be used in financial decision-making; in particular, to assess financial performance, evaluate credit risk, and forward-looking financial forecasts; for example, by projecting future cash flows and discounted cash flow (DCF) analysis. 

FINN3053 Financial Markets and Institutions (Sp, Su, Fa) Role and operations of financial markets and institutions in the economy. Supply of, demand for, funds, interest rates, and their measurement and analysis. Financial policies, practices of banks and nonbank financial institutions. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

FINN3063 Investments (Sp, Su, Fa) Introduction to basic investment concepts; hurdle rate versus relative performance; mean-variance efficient frontiers, diversification and the pricing of risk, security valuation. Prerequisite: WCOB 2043.

FINN3103 Financial Modeling (Sp, Su, Fa) Develops computer skills in financial analysis by integrating computer material with spreadsheet-based numerical solution and simulation techniques. Prerequisite: WCOB 2043.

FINN3133 Commercial Banking (Sp, Fa) Commercial bank administration, management, loans; bond portfolios; credit analysis; public relations; analysis and interpretations of Federal Reserve regulations and publications. Prerequisite: WCOB 2043.

FINN3503 Corporate Finance (Sp, Su, Fa) Develops analytical competencies in financial planning, cost of capital estimation, application of discounted cash flow approach to valuation and capital allocation, lease analysis, evaluation of the effects of deferred tax and intertemporal restructuring strategies. Prerequisite: WCOB 2043.

FINN3623 Risk Management (Sp, Fa) A survey of the extent and types of risk in business; ways of dealing with business risk; risk management and commodity exchanges; survey of insurance for risk bearing purposes.

FINN3703 International Finance (Sp, Su, Fa) Introduction to international financial markets, exchange rates and exchange rate determination, balance of trade measures, and vehicles for foreign trade financing.

FINN3993 Real Estate Principles (Sp, Su, Fa) Comprehensive, covering economics of real estate, real estate ownership, rights in real property, and their transfer, public programs, policies relating to real property.

FINN4003 Finance Honors Colloquium (Irregular) Explores important concepts, significant events and/or new developments in the field of Finance. Prerequisite: Senior standing.

FINN4013 Seminar in Personal Financial Planning (Sp) Explores financial planning functions, including income, education, tax planning, and charitable giving. Prerequisite: FINN 3003.

FINN410V Special Topics in Finance (Irregular) (1-6) Explore current events, new developments and special topics in Finance not covered in other courses. May be repeated for 6 hours. Prerequisite: FINN 3043. May be repeated for 6 hours.

FINN4133 Advanced Investments (Sp, Fa) Sound principles used in financial decision-making; in particular, to assess financial performance, evaluate credit risk, and forward-looking financial forecasts; for example, by projecting future cash flows and discounted cash flow (DCF) analysis.

FINN4143 Fixed Income Securities I (Fa) The market and institutional settings of fixed income securities; valuation and risk analysis of money market and capital market instruments; strategies and management of bond portfolios; taxable and tax-exempt securities; U.S. and non-U.S. fixed income securities; term structure of interest rate; and interest rate derivatives as hedging tools. Prerequisite: FINN 3043 and FINN 3063.

FINN4173 Fixed Income Securities II (Sp) Continuation of FINN 4163. The markets and institutional settings of fixed income securities; valuation, and risk analysis of money market and capital market instruments; strategies and management of bond portfolios; taxable and tax-exempt securities; U.S. and non-U.S. fixed income securities; term structure of interest rate; and interest rate derivatives as hedging tools. Prerequisite: FINN 3043 and FINN 3063.

FINN4233 Advanced Corporate Finance (Sp, Su, Fa) Addresses complex and multifaceted issues and problems in financial decision-making. Prerequisite: FINN 3603.

FINN4313 Advanced Commercial Banking (Sp) Problems and cases emphasizing application of analytical tools and techniques in decision making process. Determination of operating policies regarding loans, investments, liquidity, capital; efficient performance of lending, investment function; profit planning, analysis; strategies of growth, competition, and evaluation of bank performance. Prerequisite: FINN 3133.

FINN4413 Real Estate Investment and Appraisal (Fa) Investment analysis and valuation theory applied to real estate. Prerequisite: FINN 3933.

FINN4433 Real Estate Finance (Sp) Introduction to real estate finance, valuation, and investment appraisal. Prerequisite: FINN 3933.

FINN4450V Independent Study (Sp, Su, Fa) (1-3) Permits students on an individual basis to explore selected topics in finance, with the consent of instructor.

FINN4473 Life and Health Insurance I (Fa, Sp) Basic principles, functions, uses of life and health insurance; types of policy contracts; calculation of premiums, reserves; organization, management, supervision, of companies.

FINN4483 Property and Casualty Insurance I (Sp) Property and casualty insurance; automobile, marine, aircraft title, miscellaneous types insurance and bonds for business, personal use.

FINN4484 Property and Casualty Insurance II (Sp) Institutional and functional aspects of property and casualty insurance industry; analyzes types of carriers, marketing organizations, underwriting, rates and rate making, financial analysis, problems facing the industry in these areas.

FINN5203 Money and Capital Management (Sp, Su) Role of finance in U.S. economy; the institutions, monetary policy, policies which comprise environment in which financial decisions are made; financial decision making on behalf of the firm; financial analysis, planning and control, financial decision making models, financial policies for management.

FINN5223 Financial Market and Capital (Irregular) Analysis of financial information by capital markets in the determination of security values with specific applications to retail and logistics companies. This course views the financial environment from the point of view of the capital market. May be repeated.

FINN5303 Advanced Corporate Financial Management (Sp, Su) Focus on financial policy issues using real situations. Topics include cost of capital, capital budgeting and short-term planning, value management, real options, as well as project financing and valuation.

FINN5333 Investment Theory and Management (Fa) Integration of practice, theory of investments with empirical tests of the theories.

FINN5353 Advanced Corporate Financial Management (Sp, Su) Focus on financial policy issues using real situations. Topics include cost of capital, capital budgeting and short-term planning, value management, real options, as well as project financing and valuation.

FINN5413 Shollmier Investment Project (Sp) Provide students with the opportunity to design and apply complex investment management and portfolio management strategies. Students will use top down asset allocation models, bottom up security selection models, performance measurement. Prerequisites: FINN 5223 and FINN 5333. May be repeated.

FINN5443 Retail Finance (Fa) The financial success of retail product and service offerings depends on a clear understanding of the socio-economic as well as demographic and environmental factors that drive the changing patterns of consumption. This course introduces the fundamentals and the tools, specifically geographic information systems (GIS) and psychographic market analysis, to make informed financial decisions. Extensive case studies are utilized throughout the course to learn concepts and best practices. Prerequisite: FINN 5223. May be repeated.

FINN6523 Investment Banking and Securities Markets (Fa) Topics include investment banking, securitization, traditional and new financial products, money management, and financial innovation. Prerequisite: FINN 5203.

FINN5633 Financial Institutions (Sp) Savings intermediaries and their effects on allocating accumulations; specific characteristics of financial institutions including services, assets management and growth; relations between growth of institutions and interest rates, consumer behavior, investment demand, government policies, and critical evaluation of performance by financial intermediaries. Prerequisite: FINN 5203.

FINN6703 Multinational Business Finance (Fa) Problems pertinent to managers of firms in multinational business environments, including international institutions, risks, investments and capital budgeting. Prerequisite: FINN 5203.

FINN6833 Finance Theory (Sp, Su, Fa) Provides a conceptual understanding of financial decision-making in the field of financial economics, including firm decisions under risk within a world of uncertainty.

FINN6833 Seminar in Investment Theory (Sp) Explores important concepts, significant events and/or new developments in the field of financial economics, including firm decisions under risk within a world of uncertainty.

FINN6833 Seminar in Financial Management (Fa, Sp) Financial management of firm with emphasis on financial theory or firm, quantitative methods used in financial analysis, planning, and other related fields.

FINN6837V Special Problems in Finance (Irregular) (1-6) Case studies in investments, corporation finance, money and banking, monetary theory, international finance, public finance. By arrangement. May be repeated for 6 hours.

FINN6733 Seminar in Financial Markets and Institutions (Sp, Su, Fa) Recent developments in the literature of financial markets and institutions. Participants will be involved in the extensive study of existing theories and empirical tests of the theories.

FINN700V Doctoral Dissertation (Sp, Fa) Prerequisite: candidacy.

FINN5022 Multinational Business Finance (Sp) Problems pertinent to managers of firms in multinational business environments, including international institutions, risks, investments and capital budgeting. Prerequisite: FINN 5203.

FINN5043 Money Theory (Sp, Su, Fa) Provides a conceptual understanding of financial decision-making in the field of financial economics, including firm decisions under risk within a world of uncertainty.

FINN6733 Seminar in Financial Markets and Institutions (Sp, Su, Fa) Recent developments in the literature of financial markets and institutions. Participants will be involved in the extensive study of existing theories and empirical tests of the theories.

FINN700V Doctoral Dissertation (Sp, Fa) Prerequisite: candidacy.

FLAN3002 Health and Life Sciences Terminology (Irregular) A systematic introduction to the Greek and Latin components of terminology used in the health and life sciences. Recommended for majors in zoology, chemistry, biology, botany, pre-med, pre-dent, pre-vet, pre-nursing, and other health-related fields.

FLAN302V Translation Workshop (Irregular) (1-3) Introduction to translation as a literary form, dealing with the problems involved in interpreting a text and rewriting it in English. (Same as ENGL 302V)

FLAN3173 Introduction to Linguistics (Irregular) Introduction to language study with stress upon modern linguistic theory and analysis. Data drawn from various languages reveal linguistic universals as well as phonological, syntactic, and semantic systems of individual languages. Related topics: language history, dialectology, language and its relation to culture and society, the history of linguistic study. Prerequisite: junior standing. (Same as ANTH 3173, COMM 3173, ENGL 3173)

FLAN3923H Honors Colloquium (Irregular) Covers a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in foreign languages). May be repeated for 99 hours.

FLAN398V Special Studies (Irregular) (1-6) A course (not independent study) which covers a topic or author not usually presented in depth in regular courses. May be repeated for 99 hours.

FLAN4003 Special Language I (Fa) Under the number, various Oriental, African, or other less commonly-taught languages will be offered from year to year. Prerequisite: French 101. Junior standing. May be repeated for 3 hours.

FLAN4013 Special Languages II (Irregular) Continuation of Special Language I. Prerequisite: FLAN 4003 or equiv-
lent. May be repeated for 3 hours.

FLAN4023 Language Teaching and the Internet (Fa) (Junior level undergraduate and graduate students of foreign languages with innovative ways to teach and communicate through the use of the internet as applied to second language learning. Topics of discussion include instructional systems design, web-based technologies, graphics, presentation technologies, and effective utilization of technological tools in language courses. Prerequisite: Senior standing.

FLAN4023 Language Teaching and Video Applications (Sp) This course profits senior level undergraduates and graduate students with the knowledge and skills needed to teach and communicate through the use of video as applied to second languages. Topics of discussion include instructional systems design, video taping, editing and development for internet and DVD delivery, and effective utilization of video in teaching and communication. Prerequisite: Senior standing. May be repeated.

FLAN423V Culture and Civilization: Field Studies (Irregular) (1-6) May be taken by students participating in overseas study programs approved by the department.

FLAN4713 Language and Culture (Sp, Su, Fa) Anthropological approaches to the description and analysis of languages and their extension into ethnographic semantics with emphasis on cognitive models and their sociological correlations. (Same as GEOG 4713/COMM 4713)

FLAN504V Translation Workshop (Irregular) (1-6) Problems of translation and the role of the translator as both scholar and creative writer; involves primarily the discussion in workshop of translated poetry, drama, and fiction done by the students, some emphasis upon comparative studies of existing translations of well-known works. Primary material will vary. Prerequisite: reading knowledge of a foreign language.

FLAN505V Workshop (Irregular) (1-3) Specialized professional problems and topics in foreign language based careers. May be repeated for 3 hours.

FLAN5063 Teaching Foreign Languages on the College Level (Irregular) Focus on basic methodological concepts and their practical application to college foreign language instruction.

FLAN5083 Developments in Second Language Teaching (Irregular) A review of techniques, strategies, and methodologies and a survey of recent developments in second language teaching.

FLAN575V Special Investigations (Sp, Fa) (1-6) May be repeated for 6 hours.

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French (FREN)

FREN1003 Elementary French I (Sp, Fa) (Same as FREN 1003)

FREN103 Elementary French II (Sp, Fa) Elementary courses stress correct pronunciation, aural comprehension, and simple speaking ability, and lead to mastery of basic grammar and limited reading ability. Prerequisite: FREN 1003 or equivalent. (Same as FREN 1013)

FREN1016 Intensive Elementary French (Sp, Su, Fa) Equivalent to 1003 and 1013. Stress aural comprehension and practical speaking ability. Reading, writing, and grammar in support of communication skills.

FREN2003 Intermediate French I (Sp, Fa) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: FREN 1013 or equivalent. (Same as FREN 2003) FREN2013H Honors Intermediate French II (Sp, Fa) Prerequisite: FREN 2003 or equivalent. (Same as FREN 2013)

FREN2013 Intermediate French II (Sp, Fa) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: FREN 2003 or equivalent. (Same as FREN 2013)

FREN2016 Intermediate French (Sp, Su, Fa) Equivalent to FREN 2003 and 2013. Stress aural comprehension and practical speaking ability. Reading, writing, and grammar in support of communication skills. Prerequisite: FREN 2103 or equivalent.

FREN3003 Advanced French (Sp, Su, Fa) Further intensive practice for the purpose of strengthening written and oral expression. Includes a review of the essentials of French grammar. Prerequisite: FREN 2013 or equivalent.

FREN3033 French Conversation (Fa) Three hours per week of guided conversation practice for the post-intermediate student. Prerequisite: FREN 2013.

FREN3063 Ph.D. Reading Requirement I (Su) (Same as FREN 3063)

FREN3103 Cultural Readings (Sp, Su, Fa) A course designed to build vocabulary and to strengthen reading skills and oral expression through extensive practice with culturally authentic materials. Prerequisite: FREN 2013.

FREN3113 Introduction to Literature (Sp, Su, Fa) Further development of reading skills and introduction to literary commentary and analysis. Prerequisite: FREN 3003 or FREN 3103.

FREN399VH Honors French Course (Sp, Fa) (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

FREN4003 French Grammar and Composition (Sp) Prerequisite: FREN 3003 or FREN 3103. (Same as FREN 4003)

FREN4033 French for Oral Proficiency (Sp) Three hours per week of conversation practice for the advanced undergraduate. Prerequisite: FREN 3003 or FREN 3103.

FREN4063 Applied Linguistics: Phonology, Morphology, and Syntax (Fa) Prerequisite: FREN 3003 or FREN 3103.

FREN4113 Social Themes in French Literature (Irregular) Topics not normally covered in period courses. Sample topics: “The Comic Tradition in French Literature,” “French Cinema.” Topics announced one semester in advance. Prerequisite: FREN 3113.

FREN4203H Honors Quebec Studies (Irregular) A study of Quebec’s culture, institutions, economy, literature and cinema. Prerequisite: FREN 3113. (Same as FREN 4203)

FREN4203 Quebec Studies (Irregular) A study of Quebec’s culture, institutions, economy, literature and cinema. Prerequisite: FREN 3113. (Same as FREN 4203)

FREN4213 French Civilization (Sp) Prerequisite: FREN 3113. (Same as FREN 4213)

FREN4223 A Survey of French Literature I (Sp, Fa) A survey of French literature, its forms and themes from the medieval period through the 18th century. Prerequisite: FREN 3113.

FREN4233 A Survey of French Literature II (Sp, Su, Fa) A survey of French literature, its forms and themes in the 19th and 20th centuries. Prerequisite: FREN 3113.

FREN4333 Business French (Fa) Introduction and orientation to the French world of business and commerce through the study of vocabulary, forms, and formulas and expression used in commercial correspondence. Prerequisite: FREN 3113.

FREN4343 Business French: Quebec (Sp) Introduction to French Business Language in the context of North America, focusing on Quebec and its economy. Prerequisite: FREN 3113 or equivalent. May be repeated for 3 hours.

FREN475V Special Investigations (Sp, Fa) (1-6) May be repeated for 99 hours.


FREN5013 French Stylistics and Advanced Composition (Irregular) Analysis of genres and stylistic choices available in written French. Intensive practice in composition especially as it relates to graduate-level courses.

FREN5033 Advanced French Conversation (Irregular) This course will provide small discussion environment in which graduate students will improve their command of spoken French in an interactive setting. Discussion will concentrate on current cultural issues in the French-speaking world.

FREN5213 French Culture & Civilization (Irregular) An analysis of cultural symbols and attitudes as observed in their historical economical, political, social, educational, and linguistic aspects.

FREN5233 Advanced Business French (Irregular) The purpose of this course is to provide insight into both the language and the culture of the French-speaking business world, primarily in metropolitan France. The course is primarily an advanced language course focused on a specialized and technical vocabulary and subject matter, drawn from the world of business.

FREN5333 Old French Literature (Irregular) An intensive study of French Medieval Literature from the Chansons de Geste to Villon, including an in-depth analysis of the genres and their evolution, and of the major authors of the times.

FREN5433 French 16th Century Literature (Irregular) A survey of representative writers of the sixteenth century.

FREN5533 French 17th Century Theatre (Irregular) A survey of representative writers of the seventeenth century.

FREN5573 French 18th Century Literature (Irregular) 

FREN5703 Special Topics (Irregular) May be offered in a subject not specifically covered by the courses otherwise listed. May be repeated for 6 hours.

FREN5723 The Development of French Romanticism (Irregular)

FREN575V Special Investigations (Irregular) (1-6) May be repeated for 6 hours.

FREN5783 The French Nineteenth Century Novel (Irregular)

FREN5813 French 20th Century Theatre (Irregular)

FREN5823 French 20th Century Literature (Irregular) A survey of representative writers of the twentieth century.

FREN5833 French 20th Century Novel (Irregular) 

FREN600V Master’s Thesis (Irregular) (1-6)
Courses Described

Central America are examined. GEOG3353 Economic Geography of NAFTA (Irregular) is designed to introduce students to the intercontinental distribution of economic activities in the countries of the North American Free Trade Agreement. Prerequisite: junior standing.

GEOG3923H Honors Colloquium (Irregular) Covers a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in geography). May be repeated for 99 hours. GEOG4543 (Irregular) 1-6 Prerequisite: junior standing. May be repeated for 12 hours.

GEOG4013 Latin America (Irregular) Geography of South America, Mexico, Central America, and the Caribbean Islands in the context of modern Latin American society and economy. Prerequisite: GEOG3023 or equivalent.

GEOG4033 Geography of the Middle East (Irregular) Physical and cultural landscapes, natural and cultural resources, art and architecture, landuse, political history, OPEC, and current problems of North Africa and the Middle East region west of Afghanistan are discussed. Class participation, discussions, slides and films, and student presentations will round out the class. Prerequisite: junior standing.

GEOG4063 Urban Geography (Sp) Areal patterns of modern urban regions and the focus shaping these patterns. Emphasis is placed on American urban areas and their evolution and functional areas. Field work. Prerequisite: junior standing.

GEOG4080 Special Problems in Geography (Sp, Su, Fa) (1-6) Designed to meet the needs of students who wish to study a special geographic topic in some detail. Prerequisite: junior standing. May be repeated for 6 hours.

GEOG4173 The Latin American City (Irregular) This course examines the social, political, and cultural aspects of the modern Latin American city from an interdisciplinary perspective. The course includes an introduction to urban studies concepts, and each semester is organized around a specific set of case studies.

GEOG4243 Political Geography (Odd years, Fa) Contemporary world political problems in their geographic context. Development of the principles of political geography with emphasis upon the problems of Eastern Europe, Africa, and South East Asia. Prerequisite: junior standing.

GEOG430V Internship in Physical Geography (Sp, Su, Fa) (3-6) Supervised experience in municipal, county, state or private natural resource management agency, or any other such organization approved by instructor.

GEOG4353 Elements of Weather (Fa) Examination of the atmospheric processes that result in multifarious weather systems. Offered as physical science. Prerequisite: junior standing.

GEOG4363 Climatology (Sp) Fundamentals of topological and regional climates followed by a study of regional climatology. Offered as physical science. Prerequisite: GEOG 1003 and/or GEOG 4363.

GEOG4383H Hazard & Disaster Assessment, Mitigation, Risk & Policy (SP) Comprehensive introduction to interdisciplinary approaches to natural and environmental hazards and risk. Hazards and disaster assessment, mitigation, and policy are the focus of the class. Prerequisite: Junior standing or above.

GEOG4383 Hazard & Disaster Assessment, Mitigation, Risk & Policy (Sp) Comprehensive introduction to interdisciplinary approaches to natural and environmental hazards and risk. Hazards and disaster assessment, mitigation, and policy are the focus of the class. Prerequisite: junior standing or above. May be repeated for 3 hours.

GEOG4384 Principles of Landscape Evolution (Fa) Geomorphology: the processes, laws, and patterns of weathering and erosion in shaping and modifying the surface of the earth. Considers the way in which an understanding of landscape processes is essential to the effective solution of environmental problems. Lecture 9 hours, laboratory 2 hours per week. May be repeated for 3 hours.

GEOG440V Internship in GIS & Cartography (Sp, Su, Fa) (3-6) Supervised experience in GIS and cartography, including projects involving local government, public agencies, and private enterprises. May be repeated for 6 hours.

GEOG4523 Computer Mapping (Sp) This course addresses cartographic concepts (i.e. visual hierarchy, artistic design, image cognition) and production techniques as they relate to computer-assisted mapping. Students produce a variety of maps using AutoCad and FreeHand software to build a map portfolio. Field trips may be required. Prerequisite: GEOG 3023.

GEOG4543 Geographic Information Science (FA, SP) Computer assisted analysis and display of geographic information data. Includes development of spatial data analysis techniques, and reinforces the theory with exercises that demonstrate its practical applications. (Same as ANTH 4543)

GEOG4563 Introduction to Raster GIS (Fa) Theory, data structure, algorithms, and techniques behind raster-based geographical information systems. Through laboratory exercises and lectures multidisciplinary applications are examined in database creation, remotely sensed data handling, elevation models, and resource models using boolean, map algebra, and other methods. Prerequisite: GEOG 4543 or ANTH 4543. (Same as ANTH 4553)

GEOG4573 Introduction to Applications in GIS (Sp, Su, Fa) Introduction to geographic information systems (GIS) applications in marketing, transportation, real estate, demographics, and urban and regional planning, and related areas. Lectures focus on development of principles, parallelized by workstation-based laboratory exercises using Arc-node based software and relational data bases. Prerequisite: GEOG 3023 or GEOG 4543. (Same as ANTH 4563).

GEOG4575 Introduction to Grass Applications in GIS (Irregular) An introduction to geographic information systems (GIS) problem solving using the Geographic Resource Analysis Support System (GRASS) software.

GEOG4593 Introduction to Global Positioning Systems (Sp, Su, Fa) Introduction to navigation, geo-referencing, and digital data collection using GPS receivers, data loggers, and software to build a map portfolio. Field trips may be required. Prerequisite: GEOG 4543 or ANTH 4543. (Same as ANTH 4553)

GEOG4793 Geographic Concepts for Global Change (Irregular) Exploring the spatial and temporal distribution of economic activities in the countries of the North American Global Change Research Program is also examined. Prerequisite: GEOG 4543 or ANTH 4543. (Same as ANTH 4553)

GEOG4863 Quantitative Techniques in Geosciences (SP, Odd Years) An introduction to the application of standard quantitative and spatial statistical techniques to geoscientific analysis. Students will use both micro and large system computers in the course. Prerequisite: STAT 4003 and STAT 4011L or equivalent. Prerequisite: senior standing.

GEOG5003 Seminar in Geography (Irregular) Selected topics, the nature of which varies with the need. Minimum enrollment is 15 students. Prerequisite: Course development. May be repeated for 3 hours.

GEOG5011 Colloquium (Sp) Weekly meetings of faculty, graduates, advanced students and guests to discuss research and trends in the field of geography. May be repeated for 3 years.

GEOG5053 Quarternary Environments (Fa) An interdisciplinary study of the Quaternary Period, including dating methods, deposits, soils, climates, tectonics, and human adaptation. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: graduate standing. (Same as ANTH 5053, GEOG 5053)

GEOG5093 History of Geography (Even years, Sp) (Credit 3:0) History of the development of the science of geography in the field of geography; and the evolution of the major concepts of geography. Prerequisite: graduate standing.

GEOG510V Special Problems in Physical Geography (Sp, Su, Fa) (1-6) Prerequisite: graduate standing. May be repeated for 6 hours.

GEOG5113 Global Change (Fa) Examines central global change including natural and human induced climate change, air pollution, deforestation, desertification, wetland loss urbanization, and the biodiversity crisis. The U.S. Global Change Research Program is also examined. Prerequisite: GEOG200V Special Problems in Human Geography (Sp, Su, Fa) (1-6) Prerequisite: graduate standing. May be repeated for 6 hours.

GEOG530V Special Problems in Regional Geography (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

GEOG5313 Planetary Atmospheres (Irregular) Origins of planetary atmospheres, structures of atmospheres, climate evolution, dynamics of atmospheres, levels in the atmosphere, the upper atmosphere, escape of atmospheres, comparative planetology of atmospheres.

GEOG5333 Research Methods and Materials in Geography (Odd years, Fa) Geographical research and the preparation of research papers. Prerequisite: graduate standing.

GEOG600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

Geography (GEOG)

GEOG1111M Honors General Geography Laboratory (Sp) Survey of geographical processes and the products and their relationships to landforms, natural resources, human beings. Lecture 3 hours, laboratory 2 hours per week. Corequisite: GEOG 1111 H. (Same as GEOG 1111M, GEOG 1111L)

GEOG1111L General Geography Laboratory (Sp) Supervised experience in GIS and/or cartography and topographic maps, and several field trips. Prerequisite: GEOG 1111. (Same as GEOG 1111M, GEOG 1111L)

GEOG1113H Honors General Geography (Irregular) Survey of geographical processes and products and their relationships to landforms, natural resources, living environments, and human beings. Lecture 3 hours, laboratory 2 hours per week. Corequisites: GEOG 1111 M. (Same as GEOG 1113M, GEOG 1113L)

GEOG1113 General Geography (Sp, Su, Fa) Survey of geographical processes and products, and their relationships to landforms, natural resources, and human beings. Lecture 3 hours per week. GEOG 1111L is recommended as a corequisite.

GEOG1131M Honors General Geography II Laboratory (Sp) Laboratory exercises concerning study of organisms commonly found as fossils, sedimentary rocks, correlations, and earth history.

GEOG1131L Environmental Geography Laboratory (Sp) Laboratory exercises concerning study of organisms commonly found as fossils, sedimentary rocks, correlations, and earth history.

GEOG1133 Environmental Geography (Sp) The application of geologic principles and knowledge of problems created by human occupancy and exploitation of the physical environment. Prerequisite: GEOG 1133 and GEOG 1111L or GEOG 1003 and GEOG 1001L. (Same as GEOG 1131L)

GEOG2313 Mineralogy (Fa) General principles and hand sample study of common minerals. Prerequisite: GEOG 1133.

GEOG3002 Geology for Engineers (Fa) Geologic principles involved in construction, reserve location, etc. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component.

GEOG3114 Invertebrate Paleontology (Sp) Survey of the invertebrate phylum commonly preserved as fossils emphasizing their physical and biological characteristics. Lecture 3 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: GEOG 1133 or (BIOL 1543 and BIOL 1541L) or equivalent.

GEOG32313 Igneous and Metamorphic Rocks (Sp) Megascopic study and classification of igneous and metamorphic rocks. Megascopic study and classification of igneous and metamorphic rocks. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: GEOG 3131.

GEOG3413 Sedimentary Rocks (Fa) A descriptive study of sedimentary rocks from the standpoint of classification, field, and laboratory description, and genesis. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab compo-
Course Descriptions

GEOS111L General Geology Laboratory (Sp, Su, Fa) Laboratory exercises concerning the forma-

tion of rocks and minerals, use of aerial photographs and

topographic maps, and several field trips. Pre- or Co-require:

GEOL 3002. (Same as GEOL 1111L, GEOL 1111M)

GEOS1113 General Geology (Sp, Su, Fa) Survey of
geological processes and products, and their relationships to

landforms, natural resources, living environments and human

beings. Lecture 3 hours per week. GEOL 1111L is recom-

mended as a corequisite. (Same as GEOL 1113)

GEOS113L Environmental Geology Lab (Sp, Su, Fa)
Laboratory exercise concerning human interactions with

the physical environment including the study of earthquakes,

volcanoes, flooding, erosion, mining and water supply,

contamination, and waste disposal. Prerequire: GEOL 1113 and

GEOL 1111L or GEOG 1003 and GEOG 1001L. (Same as

GEOL 113L)

GEOS113V Cooperative Education Program

May be repeated for 99 hours.

GEOS113V Cooperative Education Program

May be repeated for 99 hours.

GEOS1253 Petroleum Geology (Sp)
Course includes basic theories of ocean basin evolution,

disenfranchised, and minorities who live in the less desirable,

and niches of our country. The class integrates science with

philosophy, politics, economics, policy, and law, drawing on

award-winning films, current news, and case studies. (Same as

GEOS 4693)

GEOS1253 Environmental Geology of Our National Parks (Fa)
This course examines the underlying geology responsible for

selected parks, and explores the interplay of geology, biology,

climate, topography, and human use to evaluate the value of

the parks, and to anticipate the problems they will face in the near

and long-term. Prerequisite: GEOL 1113. (Same as GEOS 4563)

GEOS1253 Geology of Our National Parks (Fa)
This course examines the underlying geology responsible for

selected parks, and explores the interplay of geology, biology,

climate, topography, and human use to evaluate the value of

the parks, and to anticipate the problems they will face in the near

and long-term. Prerequisite: GEOL 1113. (Same as GEOS 4563H)

GEOS1413 Principles of Remote Sensing (Fa)
Prerequisite: Honors candidacy (not restricted to

candidacy in geology or geography). May be repeated.

GEOS1413 Principles of Remote Sensing (Fa)
Prerequisite: Honors candidacy (not restricted to

candidacy in geology or geography). May be repeated.

GEOS1541 Remote Sensing of Natural Hazards (Irregular)
Special honors research in geology. One hour credit each

semester. Prerequisite: junior honors.

GEOS1563 Hydrogeological Modeling (Irregular)
Topics include numerical simulation of ground water flow,

solute transport, aqueous geochemistry, theoretical develop-

ment of equations, and error analysis. Emphasis on

practical applications and problem solving. Prerequisite:

GEOL 4033 and computer literacy.

GEOS1563 Hydrogeological Modeling (Irregular)
Topics include numerical simulation of ground water flow,

solute transport, aqueous geochemistry, theoretical develop-

ment of equations, and error analysis. Emphasis on

practical applications and problem solving. Prerequisite:

GEOL 4033 and computer literacy.

GEOS1600 Geology Field Camp (Su) A professional
course taught off-campus emphasizing occurrence,

description, mapping, and interpretation of major rock types.

Prerequisite: GEOL 3002 and GEOL 3571L. (May not be taken for

graduate credit).

GEOS1841V Cooperative Education Program

(Sp, Su, Fa) (1-6) Credit for off-campus, compensated

work experience arranged through the Cooperative

Educational Office and Department of Geology.

May be repeated for 99 hours.

GEOS3113 Environmental Geology (Sp, Su, Fa)
Survey of geology of the world's oceans, including

the basic geology of the oceans, plate tectonics, and

the role of the oceans in the global environment. Lecture 3

hours per week. Prerequisite: GEOL 1111 and GEOL 3571L.

GEOS3554 Tectonics (Fa) Development of rami-
ications of the plate tectonics theory of the evolution of

mountain belts. Lecture 3 hours per week. Prerequisite:

GEOL 3531 and GEOL 3571L.

GEOS3560V Graduate Special Problems (Sp, Su, Fa) (2-6) \ Linking special research problems

in different phases of geology. May be repeated for 4 hours.

GEOS400V Apprentice Geology Field Trip (Sp, Su, Fa) (1-2) Field trip to areas of geologic interest,

usually conducted during Spring Break. Prerequisite: GEOL 3313. May be repeated

for 59 hours.

GEOS4233 Stratigraphy and Sedimentation (Sp)
Introductory investigation of stratigraphic and sedimentologic factors important to the study of

sedimentary rocks. Lecture 2 hours, laboratory 3 hours per week. A required weekend,
two-day field trip will be conducted during the semester. Corequisite: Lab component.Prerequisite: GEOL 3413.

GEOS4233 Stratigraphy and Sedimentation (Sp)
Introductory investigation of stratigraphic and sedimentologic factors important to the study of

sedimentary rocks. Lecture 2 hours, laboratory 3 hours per week. A required weekend,
two-day field trip will be conducted during the semester. Corequisite: Lab component.Prerequisite: GEOL 3413.

GEOS4233 Stratigraphy and Sedimentation (Sp)
Introductory investigation of stratigraphic and sedimentologic factors important to the study of

sedimentary rocks. Lecture 2 hours, laboratory 3 hours per week. A required weekend,
two-day field trip will be conducted during the semester. Corequisite: Lab component.Prerequisite: GEOL 3413.

GEOS4233 Stratigraphy and Sedimentation (Sp)
Introductory investigation of stratigraphic and sedimentologic factors important to the study of

sedimentary rocks. Lecture 2 hours, laboratory 3 hours per week. A required weekend,
two-day field trip will be conducted during the semester. Corequisite: Lab component.Prerequisite: GEOL 3413.

GEOS4413 Principles of Remote Sensing (Fa)
Theoretical and practical consideration of radar imagery,
as well as photographic methods for measuring Earth resource problems related to agriculture, archeology,
éngineering, forestry, geography, and geology. Corequisite: GEOS 4410L. Prerequisite: GEOL 1004 and GEOL 3002.

GEOS4413 Principles of Remote Sensing (Fa)
Theoretical and practical consideration of radar imagery,
as well as photographic methods for measuring Earth resource problems related to agriculture, archeology,
éngineering, forestry, geography, and geology. Corequisite: GEOS 4410L. Prerequisite: GEOL 1004 and GEOL 3002.

GEOS4413 Principles of Remote Sensing (Fa)
Theoretical and practical consideration of radar imagery,
as well as photographic methods for measuring Earth resource problems related to agriculture, archeology,
éngineering, forestry, geography, and geology. Corequisite: GEOS 4410L. Prerequisite: GEOL 1004 and GEOL 3002.

GEOS4413 Principles of Remote Sensing (Fa)
Theoretical and practical consideration of radar imagery,
as well as photographic methods for measuring Earth resource problems related to agriculture, archeology,
éngineering, forestry, geography, and geology. Corequisite: GEOS 4410L. Prerequisite: GEOL 1004 and GEOL 3002.

GEOS4563H Honors Geology of Our National Parks (Fa)
This course examines the underlying geology responsible for

selected parks, and explores the interplay of geology, biology,

climate, topography, and human use to evaluate the value of

the parks, and to anticipate the problems they will face in the near

and long-term. Prerequisite: GEOL 1113. (Same as GEOS 4563)

GEOS4563 Geology of Our National Parks (Fa)
This course examines the underlying geology responsible for

selected parks, and explores the interplay of geology, biology,

climate, topography, and human use to evaluate the value of

the parks, and to anticipate the problems they will face in the near

and long-term. Prerequisite: GEOL 1113. (Same as GEOS 4563H)

GEOS4563 Near Surface Prospection (Sp) Use of
topographic remote sensing imagery in support of

detectors for detecting and mapping subsurface features up to 5m

in depth. Magneto-metry, resistivity, conductivity, ground-

penetrating radar, and other methods are examined with a

particular focus on their use for detecting archaeological deposits.

Requires use of instruments, computer skills, and field trips.

Prerequisite: ANTH 4553 or GEOG 4553 or ANTH

4573 or GEOG 4543 or GEOG 4543 and GEOL 1113 and

ANTH 3023. (Same as ANTH 4633)

GEOS4563H Honors Environmental Justice (Sp)
This course deals with the ethical, environmental, legal,

economic, and social implications of society's treatment of the poor,

the disenfranchised, and minorities who live in the less desirable,

neighboring communities, and niches of our country. The class integrates science with

philosophy, politics, economics, policy, and law, drawing on

award-winning films, current news, and case studies. (Same as

GEOS 4693)

GEOS4563 Environmental Justice (Sp)
This course deals with the ethical, environmental, legal, economic, and social implications of society's treatment of the poor,

the disenfranchised, and minorities who live in the less desirable,

neighboring communities, and niches of our country. The class integrates science with

philosophy, politics, economics, policy, and law, drawing on

award-winning films, current news, and case studies. (Same as

GEOS 4693)

GEOS4563H Honors Environmental Justice (Sp)
This course deals with the ethical, environmental, legal, economic, and social implications of society's treatment of the poor,

the disenfranchised, and minorities who live in the less desirable,

neighboring communities, and niches of our country. The class integrates science with

philosophy, politics, economics, policy, and law, drawing on

award-winning films, current news, and case studies. (Same as

GEOS 4693)

GEOS4563GPS GeoGeodesy in Geoscience (Even

years, Sp) Applications of GPS geodesy in geosciences are presented with emphasis on course studies and

research projects such as seismic and volcanic hazard.

Statistical procedures and factors affecting data quality will be

discussed. Analysis will focus on archived data, on-line data from

GPS research networks, and data collected by students. Lecture 2 hours, laboratory 2 hours per week.

Prerequisite: GEOL 1113.

GEOS5503 Quaternary Environments (Fa)
interdisciplinary study of the Quaternary Period, including dating methods, deposits, soils, climates, tectonics, and human activities. 5 hours lecture, 2 hours laboratory per week. (Same as ANTH 5053, ENDY 5053, GECG 5053.) Prerequisite: graduate standing.

GEOS5853 Environmental Isotope Geochemistry (Sp) Introduction to principles of isotope fractionation and distribution in geologic environments, isotopic analytical methods, and extraction of isotope samples; application of isotopes in characterization of geologic processes and interactions with biologic, surface, and biologic attenuation, paleothermometry and soil, and biogeochemical processes. Prerequisite: GEOL 5063 or GEOL 5263. (Same as ENDY 5853) May be repeated for 3 hours.

GERM 1003 Elementary German I (FA, SP, SU) (Same as GERM 1003)
GERM 1013 Elementary German II (FA, SP, SU) Elementary courses stress correct pronunciation, aural comprehension, and simple speaking ability. Prerequisite: GERM 1003 or equivalent. (Same as GERM 1013)

GERM 2003 Intermediate German I (FA, SP, SU) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: GERM 1013 or equivalent. (Same as GERM 2003H, GERM 2003J)

GERM 2013H Honors Intermediate German II (Sp, Fa) (Same as GERM 2013)

GERM 2033 Intermediate German II (FA, SP, SU) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: GERM 2003 or equivalent. (Same as GERM 2013H)

GERM 3003 Advanced German I (Fa) Development of reading, writing, listening, and speaking skills. Some grammar review and translation exercises. Emphasis on vocabulary acquisition and the correct use of idiomatic expressions. Prerequisite: GERM 2013. (Same as GERM 3003)

GERM 3013 Introduction to Literature (Fa) Development of reading skills and introduction to literary analysis. Prerequisite: GERM 2013 or equivalent. (Same as GERM 3013)

GERM 3023 Introduction to Literature (Fa) Development of reading skills and introduction to literary analysis. Prerequisite: GERM 2013 or equivalent. (Same as GERM 3023)

GERM 3033 Conversation (Sp) Three hours per week of guided conversation practice for the post-intermediate student. Prerequisite: GERM 2013.

GERM 3053 Ph.D. Dissertation Requirement (Su) (Same as GERM 3063, GERM 4003, GERM 4003H)

GERM 309HVH HONORS GERMAN COURSE (Sp, Fa) (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

GERM 4003 Advanced German II (Sp) Further development of reading, writing, listening, and speaking skills. Some grammar review and translation exercises. Emphasis on vocabulary acquisition and the correct use of idiomatic expressions. Prerequisite: GERM 3063, GERM 3063H, GERM 4003.

GERM 4043 Conversation (Sp) Three hours per week of conversation practice for the advanced undergraduate. Prerequisite: GERM 3013.

GERM 4123 The German Novelle (Irregular) An intensive study of the novelle as a genre from its origin to the present. Prerequisite: GERM 3103.

GERM 4133H Honors The German Drama (IR) A study of the development of the forms and themes of the German drama from the middle ages to the present. Prerequisite: GERM 3013.

GERM 4133 The German Drama (Irregular) A study of the development of the forms and themes of the German drama from the middle ages to the present. Prerequisite: GERM 3013.

GERM 4143 German Lyric Poetry (Irregular) A study of the forms and themes of German lyric poetry from the middle ages to the present. Prerequisite: GERM 3013. (Same as GERM 4213)

GERM 4223 German-Speaking Countries in the 20th Century (Sp, Su, Fa) Continues the introduction to German culture and civilization begun with GERM 4213 with emphasis on the emergence in the 20th century contemporary Austria, Switzerland, and a unified Germany.

GERM 4333 Business German I (Fa) Introduces students to the language of business German and provides insights into business practices in German-speaking countries. Covers aspects of business geography, the European Union, transportation/shipping, business correspondence, resume writing and job application. Open to all majors; no business prerequisites. Prerequisite: GERM 2013. May be repeated for 6 hours.

GERM 4343 Business German II (Sp) Introduces students to the language of business German and provides insights into business practices in the German-speaking countries. Covers aspects of business geography, environmental issues, merchandising, trade, forms of payment, taxation, benefits, import/export, and business correspondence. Open to all majors; no business prerequisites. Prerequisite: GERM 2013 and GERM 4333. May be repeated for 6 hours.

GERM 470 Special Topics (Irregular) (1-3) May be repeated for 12 hours. Prerequisite: GERM 470V Special Topics (Irregular) (1-3) May be repeated for 12 hours. Prerequisite: GERM 470V Special Topics (Irregular) (1-3) May be repeated for 12 hours. Prerequisite: GERM 470V Special Topics (Irregular) (1-3) May be repeated for 12 hours. Prerequisite: GERM 470V Special Topics (Irregular) (1-3) May be repeated for 12 hours.

GRSD 400V Research Experience Undergraduate Internship (Su) (1-6) Internship for students participating in an undergraduate research experience. May be repeated for 12 hours.

GRSD 5003 Teaching in Higher Education (Irregular) This course is designed to help graduate students and post-doctoral fellows become more effective at promoting learning within a diverse student body across a variety of disciplines.

GRSD 5013 Practicum for Future Faculty (Irregular) (1-3) Seminar on selected topics for those anticipating a career teaching in higher education. May be repeated for 6 hours.

GRSD 5053 Special Topics in Preparing Future Faculty (Irregular) (1-3) Seminar on selected topics for those anticipating a career teaching in higher education. May be repeated for 6 hours.

Human Environmental Sciences (HESC)

HESC 1013 Introduction to Clothing Concepts (Sp, Fa) Origin of dress, the evolution of fashion as an economic power, the sociological and psychological aspects of dress.
HESC1023 Introduction to Apparel Production (Sp, Fa) Course focuses on basic principles of apparel production and analysis of garment components of mass produced apparel. Students will learn computer-aided design programs in the production process. Laboratory 5 hours per week.

HESC1031 About the Profession (Fa) Exploration of the field of interior design. Guest speakers and field trips. Corequisite: HESC 1501 (HESC MAJORS ONLY), HESC 1031.

HESC1034 Design Exploration I (Sp) Introduction to design language through two- and three-dimensional projects. Topics: HESC 1501 (HESC MAJORS ONLY). HESC 1031.

HESC1053 Computer Based Methods for Apparel (Sp, Fa) This course is designed to give students basic experience with CAD (computer aided design) software.

HESC1201 Introduction to Diets and Nutrition (Fa) Introduction to profession of dietetics and nutrition including history, scope and future of professionals with emphasis on academic preparation, internships, acquisition of professional experiences and career opportunities. Guest speakers will supplement lectures and assignments.

HESC1213 Nutrition in Health (Sp, Fa) The functions of body nutrients and optimum diets in relation to health and physical fitness. (Same as HESC 1213)

HESC1213 Nutrition in Health (Fa, Sp) The functions of food, body processes, optimum diets in relation to health and physical fitness. (Same as HESC 1213)

HESC1403 Life Span Development (Sp, Fa) A broad overview of the physical, psychological, and social development of the individual from conception until death.

HESC1501 Orientation to Human Environmental Sciences (Sp, Fa) Adjustment to study and personal problems and to career opportunities in the area of material and human environmental sciences and breadth of its professional opportunities.

HESC1601 Work Experience Practicum (Sp) This course is designed to give HRMN students credit for their required 1,000 hours of satisfactory and verifiable hospitality industry experience. Prerequisite: Declared HRMN concentration.

HESC200V Special Problems (Irregular) (1-3) May be repeated for 3 hours.

HESC2053 Introduction to Textile Science (Sp, Fa) Fashion components, terminology and design features as applied to apparel. Principles and techniques of visual merchandising as a means of mass communication in the fashion industry. Window display and store floor planning. Web design for selling merchandise. Lecture 1 hour, laboratory 4 hours per week.

HESC2111 Foods I Laboratory (Fa) Laboratory exercises and practice applicable of Foods I Lab 3 hours.

HESC2111L Foods I Laboratory (Fa) Laboratory exercises and practice applicable of Foods I Lab 3 hours.

HESC2112 Foods I (Fa) Physical and chemical characteristics of foods and factors that affect these characteristics during storage and preparation. Lecture 2 hours. Pre- or corequisite: HESC 1501 (applies to HESC majors only). Corequisite: HESC 2111L. Prerequisite: CHEM 1074 and CHEM 1103.

HESC2123 Catering Management (Sp) Course focuses on catering in food service operations and management, including on-premise, off-premise, working with a contract management operation and theme catering. Emphasis is concentrated on the functions of catering to include planning, operations, organizing the event, equipment, implementing, controlling and legal issues. Lecture 2 hours, lab 3 hours. Corequisite: Lab component. Prerequisite: HESC 2112 and HESC 2111L.

HESC2203 Nutrition for Exercise and Sport (Sp) The integration of concepts from nutrition and exercise physiology into an applied multidisciplinary study of how food, beverages and dietary supplements influence physical performance. Prerequisite: HESC 1213.

HESC2401L Infant and Toddler Development Laboratory (Sp, Fa) Corequisite: HESC 2402L.

HESC2402 Infant and Toddler Development (Sp, Fa) Human development from conception through toddlerhood. Physical, emotional, social, and cognitive development are covered. Lecture 2 hours per week. Corequisite: HESC 2401L.

HESC2413 Family Relations (Sp, Fa) Courtship, marriage, and parenthood in the United States, with attention to cultural, religious, and historical diversity. Emphasis on family life cycle and therapy. Lecture 3 hours per week. Pre- or corequisite: HESC 1501 (applies to HESC majors only).

HESC2433 Child Development (Sp, Fa) Theory, research, and application in cognitive, social, physical, and linguistic development of the child aged three to adolescence. Lecture 3 hours per week; time arranged for directed observation. Prerequisite: HESC 1213. Corequisites: HESC 2112 and HESC 2111L.

HESC2633 Introduction to Hotel Operations (Fa) Detailed study of different departments within hotel properties. Emphasis on front office, food and beverage, housekeeping, engineering, security, sales and night audit reporting.

HESC2805 Studio 3: Basic Space Planning and Communication (Fa) An introduction to interior space articulation and the creation of small scale spaces. Components of various presentation methods and formats. Overnight travel required. Prerequisites: HESC 1044 and HESC 2853.

HESC2815 Studio 4: Design Programming (Sp) Studio activities with emphasis on conceptualization, design theory and applications, ideation, programming and computer application. Prerequisite: HESC 2805. May be repeated for 5 hours.

HESC2823 Interior Design Materials and Resources (Fa) A study of materials and resources used in designing residential and contract interiors. CSI formalized utilized. Lecture 3 hours per week. Corequisite: HESC 2805.

HESC2853 Introduction to Textiles for Interior Design (Sp, Fa) Textile structure, properties, and historical use of textiles and their application to interior applications, emphasis on interior service-ability and codes may be repeated.

HESC2883 History of Interiors (Fa) Study of historic interiors and furniture from antiquity through the present day identification of interior styles and furniture of these eras is emphasized.

HESC3003 Apparel Production (Sp, Fa) A study of product development and production and the related vocabulary necessary to communicate professionally within the industry. Laboratory 6 hours per week. Prerequisite: HESC 1044 and HESC 1063.

HESC3013 Introduction to Fashion Merchandising (Fa) A study of the retailing of fashion. Included are market structures, store philosophies, job responsibilities, responsibilities of buyer in new product, structural operations, work procedures, job performance evaluation, job application, the resume, interdependencies of the retail store with other segments of the fashion industry. Recommended for students seeking jobs in organizations which produce and/or distribute fashion products and services. Lecture 3 hours per week. Prerequisite: HESC 1013 and (AGEC 1103 or ECON 2143).

HESC3033 Fashion Merchandising Methods (Sp, Fa) Exploration of activities associated with the procurement of fashion apparel. A fashion analysis is directed toward apparel demands and the creation of a fashion statement by the use of specific quantitative skills. Course follows fashion item from the designer to the store. Prerequisite: HESC 1013.

HESC3202 Nutrition for Health Professionals and Educators (Sp) Fundamental human nutrition; nutritive value of foods and general functions of nutrients based on concepts derived from inorganic and organic chemistry.

HESC3203 Design Analysis (Sp, Fa) Design analysis of fashion designs with respect to the application of design principles and theories to fashion design. Prerequisite: HESC 1031.

HESC3213 Dietetic and Nutrition Practice: Tools and Applications (Fa) Standards of practice, ethics, application of interviewing and counseling techniques, medical terminology, documentation of nutrition assessment, and reimbursement and marketing in the fields of dietetics and nutrition. Prerequisite: HESC 1213. Pre- or Corequisite: HESC 2112 and HESC 2111L.

HESC3219 Child Guidance Laboratory (Sp, Fa) Corequisite: HESC 3402.

HESC3402 Child Guidance (Sp, Fa) Introduction to the guidance system, focus on discipline techniques that are appropriate for ages 3-8. Lecture 2 hours per week. Prerequisite: HESC 1430 or PSCY 2003.

HESC3443 Families in Crisis (Fa) An interdisciplinary approach to the study of the families of children facing a variety of problems. Some attention will be given to the study of families in crisis. Lecture 3 hours per week.

HESC3604 Food Preparation for the Hospitality Industry (Sp, Fa) Preparation and service of food for large groups. Recipe standardization, menu planning, cost control, sanitation, safety, and overall quality assurance.

HESC3623 Food Preparation Laboratory (Sp, Fa) Focus on the production of the food as part of the i

HESC3653 Food Systems Management (Fa) Organization and management of institutional and hospital food service with focus on functions of management; health codes, and professional development. Lecture 3 hours per week. Prerequisite: HESC 1213.

HESC3763L Family Resource Management Laboratory (Fa) Explores management concepts and practices in the lives of individuals and families from a systemic perspective. Lecture 2 hours per week. Laboratory 2 hours per week.

HESC3815 Studio 5: Desing and Construction (Fa) Focus on the creation of interior designs for living spaces. Project includes the development of the interior design and the detailed execution of the design.

HESC3815 Studio 6: Large Scale Commercial Interiors (Fa) Advanced studio problems involving larger-scale interior spaces for public use. Overnight travel required. Prerequisite: HESC 3805. Corequisite: HESC 4813 and

HESC3815 Studio 7: Commercial Interiors (Fa) Advanced studio problems involving larger-scale interior spaces for public use. Overnight travel required. Prerequisite: HESC 3805. Corequisite: HESC 4813 and

HESC3815 Studio 8: Commercial Interiors (Fa) Advanced studio problems involving larger-scale interior spaces for public use. Overnight travel required. Prerequisite: HESC 3805. Corequisite: HESC 4813 and
Course Descriptions

HESC 4803. HESC4843 Portfolio Workshop (Fa) Preparation of portfolio for professional interior design exhibitions. Prerequisite: Junior standing in the Interior Design Program. May be repeated for 3 hours.

HESC 3843. Building Systems for Interior Design (Sp, Su) The design applications of lighting, electrical, and other building support systems. Prerequisite: HESC 2805. Corequisites: HESC 2815 or equivalent.

HESC 400V. Special Problems (Sp, Su, Fa) (1-6) May be repeated for credit.

HESC 4023. Advanced Apparel Merchandising (Sp, Fa) Advanced Apparel Merchandising aspects of fashion through interpretation of apparel classification, seasonal trends, target market, garment strategies, target customers, and apparel trends and an overview of marketing communication including advertising, personal selling and sales promotion. Prerequisite: HESC 3013 and HESC 3033.

HESC 4033. Advanced Textile Study (Sp) Use of advanced computer-aided-design (CAD) software to enhance skills in textile studies. Prerequisite: HESC 1053 and HESC 2053.

HESC 4043. History of Apparel (Fa) The evolution of clothing from ancient times to the twentieth century with emphasis upon Western civilization. Cultural and economic factors affecting dress and customs associated with dress will be examined. Lecture 3 hours per week. Prerequisite: ANTH 1023 or SOCI 301 or HESC 1013.

HESC 4053. Contemporary Apparel (Sp, Fa) Fashion as a social force, the origin, scope, theory, and history of the fashion business, the materials of fashion, the fashion producers, auxiliary fashion enterprises, designers, fashion leaders, and leading market. Lecture three hours per week. Prerequisite: HESC 1053 and HESC 4043.

HESC 4063. Advanced Apparel Production (Sp, Fa) An advanced study of product development incorporating technology used in the industry for a career in fashion merchandising and product development. Prerequisite: HESC 3003 and HESC 2013.

HESC 4073. Apparel Studies Internship (Su) A practical experience in a retail store or in a work situation related to the apparel industry to gain insight into the field of apparel formatting. General procedures for operations. Prerequisite: junior standing and 2.50 cum GPA and HESC 3003, HESC 3013 and HESC 3033 and consent of instructor.

HESC 4103. Experimental Foods (Sp) Application of experimental methods for investigations in cookery. Group and individual problems. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: HESC 2112 and HESC 2111L, and HESC 1123 and HESC 1121L, or (HESC 2113 and CHEM 1074 and CHEM 1071L).

HESC 4213. Advanced Nutrition (Fa) Normal nutrition with emphasis on utilization of nutrients. Lecture and reports on current literature 3 hours per week. Pre- or Corequisite: CHEM 3813. Prerequisite: HESC 3204.

HESC 4223. Nutrition During the Life Cycle (Fa) Study of normal nutrition emphasizing quantitative needs for nutrients and the metabolic processes than varying life stages of the life cycle. Nutritional needs during pregnancy and childhood are emphasized with some attention to nourishing stages of the life cycle. Prerequisite: HESC 3213 or PSYC 2003. Lecture 3 hours per week. Prerequisite: HESC 4213 and junior standing.

HESC 4472. Child Development Practicum (Sp, Fa) Interaction with parents and planning, implementing, and evaluating directed experiences with children ages 3-5 in an NAEYC accredited laboratory setting — U. of A. Nursery School. 2 hours lecture per week. Corequisite: HESC 4472L.

HESC 4473. Child Development Practicum (Sp, Fa) Interaction with parents and planning, implementing, and evaluating directed experiences with children ages 3-5 in an NAEYC accredited laboratory setting — U. of A. Nursery School. 2 hours lecture per week. Corequisite: HESC 4473L.

HESC 4803. Advanced Residential Design (Fa) Advanced studio problems involving residential spaces. Design for new construction, remodeling, and restoration of existing spaces. Students must work a minimum of 60 hours per semester. Lecture 3 hours per week. Prerequisite: HESC 3604 and HESC 3653. May be repeated for 3 hours.

HESC 4843V. Design Tours (Irregular) (1-3) Domestic and international study tours of a variety of design locations that contribute to the body of knowledge. Prerequisite: HESC 1044.

HESC 4863. Studio VI: Advanced Commercial Design (Sp) Advanced contract studio involving projects of a major nature related to the commercial environment. Comprehensive design solutions for programmatic requirements and complex design and solutions. Studio 6 hours per week. Prerequisite: HESC 4803. May be repeated for 3 hours.

HESC 4893. Senior Portfolio (Sp) (Formerly HESC 4893) Continuation of HESC 4843 internship preparation. Professional portfolio preparation. Presentation of portfolio at annual exhibition is required. Studio 2 hours per week. Prerequisite: HESC 4843 and HESC 4803.

HESC 4903. Recent Advances in Manufacturing and Merchandising (Su) Study of the interaction between manufacturing, marketing, and merchandising in the apparel industry through classroom instruction and study tours. Includes study trip. Additional fees required. Lecture 3 hours per week and 1 week study tour. May be repeated for a maximum of 12 hours. May be repeated for 12 hours.

HESC 4903. Recent Advances in Manufacturing and Merchandising in the Global Economy (Fa) Advanced analysis of economic, social, and political aspects of the domestic and international textile and apparel industries. Lecture 3 hours per week. Prerequisite: HESC 3003. May be repeated for 3 hours.

HESC 5003. Principles of Textile Testing (Sp) Study of textile testing machines and methods utilized to determine fiber characteristics, fabric characteristics, and performance characteristics of woven and knit fabrics. Lecture 1 hour. Laboratory 4 hours per week. Corequisites: HESC 3003. Prerequisite: HESC 3003. May be repeated for 3 hours.

HESC 5203. Recent Advances in Manufacturing and Merchandising in the Global Economy (Fa) Advanced analysis of economic, social, and political aspects of the domestic and international textile and apparel industries. Lecture 3 hours per week. Prerequisite: HESC 3003. May be repeated for 3 hours.

HESC 5203. Recent Advances in Manufacturing and Merchandising in the Global Economy (Sp) Advanced analysis of economic, social, and political aspects of the domestic and international textile and apparel industries. Lecture 3 hours per week. Prerequisite: HESC 3003. May be repeated for 3 hours.
nutrition research pertinent to the topic(s) identified for study. Lecture/seminar format 3 hours per week. Prerequisite: HESC 4213 (or ANSC 3413) and CHEM 3813. May be repeated for 99 hours.

HESC5223 Nutrition During the Life Cycle (Fa) Study of normal nutrition emphasizing quantitative needs for nutrients and nutritional processes that vary during stages of the life cycle. Nutritive needs during pregnancy and childhood are emphasized with some attention tonourishing aging and elderly adults. Factors that affect food choices and eating behaviors are considered. Lecture 3 hours per week. Prerequisite: Graduate standing and consent of instructor. May be repeated.

HESC522V Readings in Nutrition (Sp) (1-6) Seminar and/or tutorial. Prerequisite: HESC 4213 or HESC 4223 or ANSC 3143.

HESC5264 Medical Nutrition Therapy I (Fa) Principles of nutritional care with emphasis on pathophysiology, assessment and treatment in chronic illnesses. Lecture 3 hours, laboratory 3 hours per week. Prerequisite: Graduate standing and consent of instructor. May be repeated.

HESC5273 Medical Nutrition Therapy II (Sp) Principles of nutritional care with emphasis on pathophysiology, assessment and treatment in chronic illness. Lecture 3 hours, laboratory 3 hours per week. Prerequisite: HESC 5264. May be repeated.

HESC5403 Advanced Family Relations (Fa) Subtle elements of family and interrelationships among family members and between the family and the larger community. Recent cultural change as it affects the family. Recent research and literature. Prerequisite: graduate standing.

HESC5423 Theories of Human Development (Fa) Classic and contemporary theories and theoretical issues concerning human development across the life span. Prerequisite: graduate standing.

HESC5433 Advanced Child Development (Sp) Theory and research concerning normal behavior and development in childhood. Acquaintance with library resources, classic studies, and recent literature.

HESC5463 Research Methodology in Social Sciences (Sp) Logical structure and the method of science. Basic elements of research design; observation, measurement, interpretation, veriﬁcation, presentation of results. Applications to research in the economic and sociological problems of agriculture and Human Environmental Sciences. Prerequisite: graduate standing. (Same as AGEC 5013,AGED 5463,RSOC 5463).

HESC555V Special Topics in Human Environmental Sciences (Irregular) (1-3) Topics not covered in other courses or a more intensive study of speciﬁc topics in the specializations of human environmental sciences. May be repeated for 99 hours.

HESC5643 Meetings and Convention Management (Fa) Descriptive is focused on the planning and management of meetings and conventions in the hospitality industry. Prerequisites: HESC 1603 and HESC 2123.

HESC5653 Global Travel and Tourism Management (Irregular) The course recounts the history of travel, explores the future, and discusses the components of tourism from a global perspective. Prerequisite: HESC 1603.

HESC600V Master’s Thesis (Sp, Su, Fa) (1-6)

HESC700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.
Course Descriptions

HIST3043 History of the Modern Middle East (Odd years, Fa)
HIST3213 Latin American History (Sp, Fa)
HIST3223 Violence and Conflict in Latin America (Odd years, Fa, Odd years, Sp)
HIST3243 African American History Since 1877 (Sp)
HIST3323 The West of the Imagination (Irregular)
HIST3473 Palestine and Israel in Modern Times (Odd years, Fa)
HIST3593 The Unraveling of America: Life in the 1960s (Fa)
HIST3923H Honors Colloquium (Irregular)
HIST399VH Honors History Thesis (Sp, Su, Fa) (1-6)
HIST4033 Greece and the Ancient Near East (Odd years, Fa)
HIST4043 Late Antiquity and the Early Middle Ages (Sp)
HIST4093 The Ottoman Empire and Iran 1300-1453 (Even years, Sp)
HIST4133 Society and Gender in Modern Europe (Even years, Fa)
HIST4173 The Latin American City (Irregular)
HIST4193 Great Britain, 1901-1982: Empire to Welfare State (Even years, Sp)
HIST4293 Russia Since 1905 (Sp)
HIST4333 Arkansas and the Southwest (Sp)
HIST4343 Modern Imperialism (Even years, Fa)
HIST4373 Palestine and Israel in Modern Times (Even years, Fa)
HIST4383 The Unraveling of America: Life in the 1960s (Fa)
HIST4393 The Ottoman Empire and Iran 1300-1453 (Even years, Fa)
HIST4433 Modern Islamic Thought (Irregular)
HIST4443 Modern Imperialism (Even years, Fa)
HIST4453 Modern Islamic Thought (Irregular)
HIST4473 Pakistan and Israel in Modern Times (Even years, Fa)
HIST4483 The Unraveling of America: Life in the 1960s (Fa)
HIST4513 Tudor-Stuart England (Even years, Fa)
HIST4533 The Ottoman Empire and Iran 1300-1722 (Odd years, Sp)
HIST4613 New Women in the Middle East (Sp, Odd Years)
HIST4643 The Mediterranean World (Even years, Fa)
HIST4813 Great Britain, 1870-1914: Industry and Empire (Even years, Sp)
HIST4823 Russia Since 1905 (Sp)
HIST4829 Russia Since 1905 (Sp)
HIST4833 Arkansas and the Southwest (Sp)
HIST4843 Modern Imperialism (Even years, Fa)
HIST4853 The Unraveling of America: Life in the 1960s (Fa)
HIST4863 The Unraveling of America: Life in the 1960s (Fa)
HIST4873 Pakistan and Israel in Modern Times (Even years, Fa)
HIST4883 The Unraveling of America: Life in the 1960s (Fa)
HIST4893 The Ottoman Empire and Iran 1300-1722 (Odd years, Sp)
HIST4913 Great Britain, 1901-1982: Empire to Welfare State (Even years, Sp)
HIST4923 The Era of the French Revolution (Odd years, Fa)
HIST4933 Modern Imperialism (Even years, Fa)
HIST4943 Modern Imperialism (Even years, Fa)
HIST4953 Modern Imperialism (Even years, Fa)
HIST4963 Modern Imperialism (Even years, Fa)
HIST4973 Pakistan and Israel in Modern Times (Even years, Fa)
HIST4983 The Unraveling of America: Life in the 1960s (Fa)
HIST499VH Honors History Thesis (Sp, Su, Fa) (1-6)
HIST5033 Women and Christianity (Sp, Su, Fa)
HIST5043 Greece and the Ancient Near East (Odd years, Fa)
HIST5093 The Ottoman Empire and Iran 1300-1453 (Even years, Sp)
HIST5133 Tudor-Stuart England (Even years, Fa)
HIST5173 The Latin American City (Irregular)
HIST5293 Russia Since 1905 (Sp)
HIST5333 World War II (Sp)
HIST5353 The United States and Vietnam, 1945-1975 (Sp)
HIST5363 The United States and Vietnam, 1945-1975 (Sp)
HIST5433 The Unraveling of America: Life in the 1960s (Fa)
HIST5513 Tudor-Stuart England (Even years, Fa)
HIST5613 New Women in the Middle East (Sp, Odd Years)
HIST5643 The Mediterranean World (Even years, Fa)
HIST5813 Great Britain, 1870-1914: Industry and Empire (Even years, Sp)
HIST5823 Russia Since 1905 (Sp)
HIST5833 Arkansas and the Southwest (Sp)
HIST5843 Modern Imperialism (Even years, Fa)
HIST5853 The Unraveling of America: Life in the 1960s (Fa)
HIST5913 Great Britain, 1901-1982: Empire to Welfare State (Even years, Sp)
HIST5923 The Era of the French Revolution (Odd years, Fa)
HIST5933 Modern Imperialism (Even years, Fa)
HIST5943 Modern Imperialism (Even years, Fa)
HIST5953 Modern Imperialism (Even years, Fa)
HIST5963 Modern Imperialism (Even years, Fa)
HIST5973 Pakistan and Israel in Modern Times (Even years, Fa)
HIST5983 The Unraveling of America: Life in the 1960s (Fa)
HIST599VH Honors History Thesis (Sp, Su, Fa) (1-6)
HIST6033 Women and Christianity (Sp, Su, Fa)
HIST6043 Greece and the Ancient Near East (Odd years, Fa)
HIST6093 The Ottoman Empire and Iran 1300-1453 (Even years, Sp)
HIST6133 Tudor-Stuart England (Even years, Fa)
HIST6173 The Latin American City (Irregular)
HIST6293 Russia Since 1905 (Sp)
HIST6333 Modern Imperialism (Irregular)
HIST6343 Modern Imperialism (Even years, Fa)
HIST6353 Modern Imperialism (Odd years, Fa)
HIST6363 The Unraveling of America: Life in the 1960s (Fa)
HIST6373 Pakistan and Israel in Modern Times (Even years, Fa)
HIST6383 The Unraveling of America: Life in the 1960s (Fa)
HIST6393 The Ottoman Empire and Iran 1300-1722 (Odd years, Sp)
HIST6433 Modern Imperialism (Even years, Fa)
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HIST6693 Modern Imperialism (Even years, Fa)
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HIST7153 Modern Imperialism (Even years, Fa)
HIST7163 Modern Imperialism (Even years, Fa)
HIST7173 Modern Imperialism (Even years, Fa)
HIST7183 Modern Imperialism (Even years, Fa)
HIST7193 Modern Imperialism (Even years, Fa)
economic, and political themes are pursued regionally from the 16th century until present.

HIST4673 Social and Cultural History of the Modern Middle East (Odd years, Sp) An analysis of Middle East history in the 17th-20th centuries which focuses on the social transformation of urban and rural life. Particular emphasis is given to the roles of economics, genealogy, art, and popular culture.

HIST453 American Ethnic History (Sp, Su, Fa) Covers issues of ethnicity and assimilation not covered in courses African American and Native American history. Focus is threefold: the experience of immigrants and their descendants; the reactions of government, popular movements, and influential opinion-makers to immigrants; and changes in the national policy.

HIST4463 The American Frontier (Sp) American westward expansion and its influence on national institutions and character. Emphasis on the pioneer family and the frontier role in shaping American society, culture, economy, and politics. Topics include exploration, the fur trade, the cattle kingdom and the mining, farming, and military frontiers.

HIST4473 Environmental History (Irregular) Examines the interactions between human culture and the natural environments: Concepts of nature in the West and elsewhere, dynamics of the Physical Environment, case studies in Regional Environmental History and the Politics of Environmental Change.

HIST4493 Religion in America to 1860 (Irregular) History of religion in early America, primarily from a social and cultural perspective. Topics will include religion, social class, gender, government, and political structures. Particular emphasis is placed on the American experience since World War II with emphasis on the presidency, reform movements, the Cold War, and cultural developments.

HIST4743 Diplomatic History of the United States, 1776-1900 (Odd Years, Fa) Survey of American foreign relations from the American Revolution through the Spanish-American War. Principal topics include isolationism, free trade, the Spanish-American War, and the Roosevelt Corollary to the Monroe Doctrine.

HIST4744 American History to 1865: Themes and Traditions (Sp, Su, Fa) Designed to provide advanced undergraduate and graduate students with a comprehensive understanding of the full sweep of American history. Particular emphasis will be placed on American society and culture, and the American political system.

HIST4613 Colonial America to 1763 (Fa) Political, economic, and social history of colonial development from the time of contact to the Treaty of Paris, with particular but exclusive emphasis upon Anglo-America. (Same as HIST 4613)

HIST4623 Revolutionary America, 1763 to 1801 (Sp) Political, economic, and social history of Revolutionary America and the American Revolution. Emphasis is placed on the social and cultural aspects of the new nation, with a particular emphasis on the emergence of constitutional traditions.

HIST4643 Early American Republic, 1801-1828 (Sp, Fa) American history emphasizing social and cultural perspectives. Topics addressed will include westward expansion, slavery, religion, and economic change.

HIST4653 Antebellum America, 1828-1850 (Sp, Fa) A collaborative examination of the United States emphasizing social and cultural perspectives. Topics addressed will include slavery, religion, gender, the market economy, regionalism, and political developments.

HIST4643 Rebellion to Reconstruction, 1850-1877 (Even years, Sp) A survey of political, social, and economic issues from the late antebellum period through Reconstruction. Emphasis is placed on the causes of the Civil War and the problems of postwar America. A brief examination of the Civil War is included.

HIST4673 The American Civil War (Fa) An intensive study of the military, political, and economic aspects of the American Civil War period.

HIST4683 The Business Corporation in American Life and Thought (Even Years, Sp) The legal, social and political background to the business corporation; seeking explanations as to why the corporation became the dominant form of economic organization by the late nineteenth century. The course will also consider the social and political effects of corporate power.

HIST4703 Emergence of Modern America, 1876-1917 (Fa) A survey of the impact of the Industrial Revolution, Imperialism, and progressivism upon American life and institutions.

HIST4723 America Between the Wars, 1917-1941 (Sp) The impact of World War I, the 1920s, and the Great Depression upon American society and culture.

HIST4723 Recent America, 1941 to the Present (Sp) A general survey of American history since World War II with emphasis on the presidency, reform movements, the Cold War, and cultural developments.

HIST509V Research Problems in American History (Sp, Su, Fa) Prerequisite: graduate standing.
finance management for students in public and private management positions. Provides an understanding of the budgeting process, planning, and decision-making strategies for health promotion program development, organizational, and administrative schemes for program delivery, and appraisal systems for determining health programming priorities in workplace settings.

HLRD6133 Measurement in HLRD (Irregular) A review of the significant social, demographic, behavioral, developmental, and technological issues that influence health, kinesthetic, and the need for 5-hour courses. Pre- or Corequisite: for doctoral level students only.

HLRD6233 Management in HLRD (Su) Deals with principles, procedures, relationships, problems, and current practices in the supervision of health education and kinesthetic education. Includes management of facilities, programs, personnel, and processes.

HLRD6333 Measurement in HLRD (Irregular) Competencies for analysis and application of evaluation and measurement in HLRD.

HLRD660V Workshop (Sp, Su, Fa) (1-6) Laboratory in extended work experience in a selected community health program. The student works under college supervision with representatives of selected agencies.

HLRD6689V Directed Research (Sp, Su, Fa) (1-6) Laboratory in extended work experience in a selected community health program. The student works under college supervision with representatives of selected agencies.

HLRD699V Seminar (Sp, Su, Fa) (1-3) May be repeated for 3 hours.

HLRD700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.
cohort studies, retrospective cohort studies, case-control studies, cross-sectional studies, methods of sampling, estimating sample size, questionnaire design, and effects of measurement error. Prerequisite: EDFD 5393 or EDFD 6403.

HLSC999V Seminar (Irregular) (1-3) Discussion of selected topics and review of current literature in the health sciences. Prerequisite: advanced graduate standing. May be repeated for 3 hours.

Honors Education (HNED)

HNED3001H Honors Education Thesis Tutorial (Sp, Su, Fa) Designed to provide the foundation for the Honors student. Prerequisites: completion of required coursework. May be repeated for 99 hours.

HNED3923H Honors Education Seminar (Irregular) Special topics or issues in education for the Honors student. Prerequisite: honors candidacy. May be repeated for 99 hours.

HNED399H Honors Education Thesis/Project (Sp, Su, Fa) Prerequisite: honors candidacy and HNED 3001H.

Horticulture (HORT)

HORT100V Special Topics (Irregular) (1-4) Topics not covered in other courses or a more intensive study of specific topics in horticulture. May be repeated for 99 hours.

HORT1103 Plants in the Home Environment (Sp, Fa) A course describing the aesthetic, nutritional and health value, and other importance of plants to humans. The course will highlight the use and importance of plants and gardening through the ages, study significant gardens to humankind, and introduce students to using plants to their benefit. The use of color, texture, aroma and flavor in the home and landscape will be presented. Basic home gardening, plant care and use will be discussed and practiced.

HORT1203 Introduction to Plant Sciences (Sp, Fa) An introduction to basics of agricultural crop plant structure, growth, and productivity. Preparatory training in agribusiness or business is suggested. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: BIOL 1613 and BIOL 1611L (or HORT 1203 or CSES 1203).

HORT2003 Principles of Horticulture (Sp, Fa) A course introducing students to the biological and technologically underlying the propagation, production, handling and use of horticultural crops, turf and landscape plants. Students will be introduced to the various disciplines and commodities of horticulture. The use of plants for the benefit of human-kind because of their aesthetic and nutritional value will be explored. Previous instruction in Plant Science, Plant Biology or general Botany is strongly encouraged. Lecture 2 hours, laboratory 2 hours, 1 day 1 hour per week. Corequisite: Lab component.

HORT2303 Introduction to Turfgrass Management (Fa) An introductory course in turfgrass management emphasizing turfgrass growth, adaptation, and management. Methods for establishment, fertilization, mowing, cultivation, irrigation, and pest management are presented, and their impact on culture of lawns, golf courses, athletic fields, and other managed turf areas discussed.

HORT3103 Woody Landscape Plants (Fa) Identification, climatic adaptation and landscape design values of woody ornamental trees, shrubs and vines. Lecture 2 hours per week. Corequisite: Lab component.

HORT3113 Herbaceous and Indoor Plant Materials (Spring) (Irregular) Identification, culture, and use of annuals, perennials in landscapes and foliage plants in interiors. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component.

HORT3133 Advanced Woody Landscape Plants (Irregular) Study of rare and unusual plant materials for specific landscape uses and examination of cultivars of commonly used landscape plants. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: HORT 3103.

HORT3303 Vegetable Crops (Even years, Sp) Cultural and management practices of commercial and residential lawns. Principles and practices of mowing, fertilizing, irrigating, and control of weeds, insects and disease. Identification of turfgrass; equipment selection. Corequisite: Lab component. Prerequisite: BIOL 1613 and BIOL 1611L (or HORT 1203 or CSES 1203).

HORT4403 Plant Propagation (Even years, Sp) Principles and practices in the production and handling of ornamental plant materials: budding, layering, and tissue culture. The physiological basis of propagation is described. Knowledge of plant growth and physiology is needed. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: HORT 2003 and HORT 3103.

HORT4403 Rootzone Management for Golf and Sports Turf (Odd years, Fa) Preparatory training in agribusiness or business is suggested. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: BIOL 3323 and BIOL 3321L (or ANSC 3123) and CSES 2201 or CSES 2203, or HORT 3403 and HORT 3901. May be repeated for 9 hours.

HORT464V Turf Management Internship (Sp, Su, Fa) A supervised practical work experience in a horticulture or turf industry. Topics to be discussed: hajdiquo, genetic control of pairing, somatic instability, tissue culture and protoplast fusion, and male sterility. Lecture discussion 3 hours per week. Prerequisite: BIOL 3323 and BIOL 3321L (or ANSC 3123).
HRDV3113 Skills/Strategies in Human Resource Development (Sp) Addresses the acquisition of professional skills and strategies associated with creating and maintaining adult learning environments. Involves a regular class workshop situation where skills are practiced and encouraged and a work-based situation where skills are tried and improved upon as assessed. Prerequisites: HRDV 3213 and HRDV 4113.

HRDV3123 Theory and Principles of Needs Assessment in Human Resource Development (Sp, Fa) Addresses the acquisition of and application of knowledge associated with needs assessment and evaluation of human resources with emphasis on workplace settings. Prerequisites: HRDV 3213 and HRDV 4113.

HRDV3133 Communication in Human Resource Development (Sp) This course introduces communication principles and practices in HRD. Coursework emphasizes identifying and developing communication skills that apply to roles, responsibilities, and strategies while exploring how individuals communicate in organizational systems. Both theoretical and practical applications will be included. Prerequisites: HRDV 3213 and HRDV 4113.

HRDV3213 Introduction to Human Resource Development (Fa) Presents the theory and processes associated with human resource development (HRD) used to design and manage learning experiences in the areas of organization development, personnel training and development and career development. Students will analyze organizations and study global implications of HRD. Also surveys topics in human resource management (HRM) that distinguish HRM from HRD. Prerequisite: Departmental approval.

HRDV3403 Employment Law in Human Resource Development (Sp, Su) This course is designed to provide an introduction to leadership principles and practices in the HRD area, and is intended as a foundation course for students preparing to enter the HRD field. Focus is on the identification, evaluation, and synthesis of planning and conducting training in the workplace. Prerequisite: HRDV 3113. Pre-or Corequisite: HRDV 4633 May be repeated.

HRDV4093 HRD Practicum: Introduction To HRD I (Sp, Su) In an actual business/industrial setting, students will apply the theories and best practices presented and examined in the prerequisite course to identify needs in that organization. This course is designed as a joint beginning with the discovery and identification of organization needs and ending in a thoroughly researched and documented presentation of a human resource development intervention. Students will require access to organizational leaders, stakeholders, employees, and records; and will be expected to develop activities and a final product in alignment with the organization’s strategic intent. Prerequisite: HRDV 3213. May be repeated.

HRDV4613 HRD Practicum: Theory & Principles of Adult Education (Su) In an actual business/industrial setting, the student will observe, participate and apply skills regarding adult learning and theory. The focus is on identifying and evaluating leaders in the field of adult education; identifying characteristics of adult learners/teachers and evaluating current issues in the field of adult education. Prerequisites: HRDV 3213 and HRDV 4113. May be repeated.

HRDV4623 HRD Practicum: Communication (Su, Fa) In an actual work setting, the student will apply the theories, concepts and skills studied in the prerequisite course. Prerequisite: HRDV 4613. May be repeated.

HRDV4633 HRD Practicum: Skills and Strategies (Su) In an actual business or industrial setting, the student will study, observe, participate and apply skills and strategies of “good training”. The focus is on the acquisition and utilization of training content and research, the evaluation of training content and research, the application of evaluation criteria and the application of evaluation results. Prerequisite: HRDV 4613. May be repeated.

HRDV4653 HRD Practicum: Group Dynamics (Sp, Su, Fa) In an actual business/industrial setting, the student will apply the theories, concepts and skills studied in the prerequisite course and encourage learners to apply these principles within the work setting as a means of advancing their own careers while assisting their organizations to achieve their organizational goals, objectives and resulting competitive advantage. Prerequisite: HRDV 4133. May be repeated.

HRDV4663 HRD Practicum: Leadership (Sp, Fa) This course is designed to provide students through an in-depth process of interacting, and synthesizing elements related to developing, articulating, and implementing an organizational vision, mission, and strategic plan. The practicum focuses students on exploring their own organization’s strategic development plan. Prerequisite: HRDV 4203. May be repeated.

HRDV4673 HRD Practicum: Professional Development (Sp, Su) This internship is designed to enhance the student’s ability to identify personal tendencies that affect team performance, promote the application of adult learning principles by encouraging self-directed learning, and increase ethical awareness in the student’s profession. To this end, students will apply concepts from HRDV 4213 Strategies in Professional Development as they complete a personal behavioral assessment, develop an individualized personal development plan, and reflect on the role of ethics in their profession. Prerequisite: HRDV 4213. May be repeated.

HRDV4683 HRD Practicum: Introduction To HRD II (Sp, Fa) The purpose of this practicum is to implement the Human Resource Development intervention designed in the HRDV 4603 Introduction to HRD I practicum (formerly known as Principles and Functions of HRD), where students applied the theories and best practices presented and examined in HRDV 3213 Introduction to HRD to identified needs in students’ own organizations. Prerequisite: HRDV 3213. Pre- or Corequisite: HRDV 4603 May be repeated.

HRDV4693 HRD Practicum: Advanced Skills and Strategies (Sp, Su) In an actual business/industrial setting, the student will study, observe, participate and apply skills and strategies of “good training”. The focus is on the identification, evaluation, and synthesis of planning and conducting training in the workplace. Prerequisite: HRDV 3113. Pre- or Corequisite: HRDV 4633 May be repeated.

HUMN1003H Honors Introduction to the Arts and Aesthetics (Fa) An interdisciplinary, multicultural introduction to the arts through general aesthetic concepts and questions, including the nature of artistic media, form, style, and interpretation, including experimental and aesthetic approaches. (Same as HUMN 1003)

HUMN1003 Introduction to the Arts and Aesthetics (Sp, Su) An interdisciplinary, multicultural introduction to the arts through general aesthetic concepts and questions, including the nature of artistic media, form, style and interpretation, including experimental and aesthetic approaches. (Same as HUMN 1003)

HUMN1114H Honors Roots of Culture to 500 C.E. (Fa) This course constitutes the second segment of a four-semester interdisciplinary study of the Egyptian Book of the Dead, the Torah, the Roman Colosseum, Hinduism, and Christianity, open to first-year Honors students by invitation only. Corequisite: Drill component.

HUMN1124H Honors Equilibrium of Cultures 500-1600 (Sp) This course constitutes the second segment of a four-semester sequence focusing on world cultures. Semester 2 may include the interdisciplinary study of Islam, early Byzantium, Gothic architecture, Heian Japan, and the ancient Maya. Open to first-year Honors students by invitation only. Corequisite: Drill component.

HUMN2003H Honors Introduction to Gender Studies (Fa) This course explores cultural constructions of gender and sexuality using a variety of media, including literature, film, and architecture. (Same as HUMN 2003)

HUMN2003 Introduction to Gender Studies (Fa) This course explores cultural constructions of gender and sexuality using a variety of media, including literature, film, and architecture. (Same as HUMN 2003)

HUMN2114H Honors Birth of Modern Culture 1600-1900 (Fa) This course constitutes the third segment of a four-semester sequence focusing on world cultures. Semester 2 may include the interdisciplinary study of Renaissance Venice, feudal Japan, Mogul India, Jefferson’s Monticello, and Darwinism. Open to second-year Honors students by invitation only. Corequisite: Drill component.

HUMN2124H Honors Twentieth Century Global Culture (Sp) This course constitutes the fourth segment of a four-semester sequence focusing on world cultures. Semester 2 may include the interdisciplinary study of the Cold War, the Brooklyn Bridge, the Mexican Revolution, African literature, the Vietnam Memorial, and the atomic age. Open to second-year Honors students by invitation only. Corequisite: Lab component.

HUMN2213T Humanities Transfer Course

HUMN2213 Introduction to World Religions (Sp) A survey of the major religions, including—but not limited to—Hinduism, Buddhism, Judaism, Islam, and Christianity.

HUMN3003 Religions of Asia (Sp) This course explores the narrative, ritual, and communal practices of Hinduism, Buddhism, Judaism, Islam, and Christianity.

HUMN3463 On Death and Dying (Sp, Su) Reviews the theory and humanistic importance of the concepts of death and dying in society. An experimental optional one-semester interdisciplinary course taught in the format. Prerequisite: junior standing. (Same as CSHW 3163)

HUMN3203 Approaches to Religious Studies (Fa) Introduces students to the academic study of religion from a variety of disciplinary approaches. Topics include the idea of the sacred, myth, ritual, belief, symbol, values, revelation, mysticism. Explores intersections between religions and culture which have an impact on personal and collective identity. Students must complete the course with a grade of C or better. May include the CD version of the text. May be repeated for credit, but only a total of 3 hours credit can be obtained for both HUMN 3203 and HUMN 2203 (deleted).

HUMN3923H Honors Colloquium (Irregular) Treats a special topic or issue offered as a part of the Honors Program. Prerequisite: Honors candidacy. May be repeated for 99 hours.

HUMN4403 Religion and Film (Sp) In Religion and Film we will critique films which explicitly and intelligently
**Course Descriptions**

### Industrial Engineering (INEG)

**INEG1013 Principles of Industrial Engineering (Fa)**

Principles and roles of the professional industrial engineer and evaluates future trends. Introduces courses to follow and shows their relationship to the systems and the dangers of exploitation. Corequisite: Drill component. Prerequisite: MATH 2513 or graduate standing. (Same as WILT 4913)

### INEG9493 The City in American Art and Culture (Sp, Su, Fa)

An examination of the role of the city and the urban environment, including the city from colonial times to the present. May not be used to satisfy the art history requirement for art majors.

### INEG3213 Safety Engineering (Irregular)

Principles of accident and industrial disease prevention; organization and operation of industrial safety and hygiene programs; design problems involving mechanical, electrical, and fluid flow considerations. Prerequisite: sophomore standing.

### INEG3313 Law and Ethics (Irregular)

Analysis of the fundamental legal principles applicable in protecting the rights and interests of engineers and their employers; formation and discharge of contracts; agency relationships; torts; labor laws; patents; trademarks; copyrights; unfair competition; ethical, ethics; and professional relations. Prerequisite: junior standing.

### INEG3213 Quality Engineering and Management (Sp, Su, Fa)

Provides the student with complete coverage of the functional area of “Quality Assurance” ranging from the need for such a function, how it works, techniques utilized, and managerial approaches for insuring its effectiveness. Prerequisite: senior standing.

### INEG4423 Advanced Engineering Economy (Fa)

Preparation of feasibility studies, including cost estimation, risk and uncertainty analysis, design of experiments, and decision-making in the effects of taxes, depreciation, and financing costs on cash flows. Prerequisite: INEG 3413.

### INEG4443 Systems Engineering and Management (Spring)

Design and analysis of control systems and the use of exponential and Weibull models in reliability analysis; acceptance sampling procedures. Prerequisite: senior standing.

### INEG4443 Project Management (Odd years, Sp)

Analysis of the strategic level of engineering management including environmental and human sensory productivity and ethical issues in the work environment, and work design and environmental and human sensory productivity. Prerequisite: INEG 3713 and INEG 4333.

### INEG4900 Industrial Engineering Design (Sp, Fa)

Comprehensive design project for an industrial enterprise; introduction to manufacturing processes and computer-aided engineering. Survey of electronic components, and the design and fabrication of assembly and assembly. Emphasis on manufacturing. Laboratory required. Corequisite: Lab component. Prerequisite: ELEG 3903 or ELEG 2103 and INEG 3313 (or STAT 3013). (Same as ELEG 4273)

### INEG4543 Materials Handling (Sp, Su, Fa)

Equipment, systems, problems, and analysis of material handling, and dependence upon computer systems, and the design of material handling systems. May be repeated for 3 hours.

### INEG4563 Application of Robotics (Fa)

Industrial robotics, programming and applications; tooling and interfacing with peripheral equipment; sensor technology; machine vision; application analysis; selection and justification; research; economics; and human interface. Laboratory required. Corequisite: Lab component. Prerequisite: senior standing.

### INEG4553 Production Planning and Control (Sp)

Operational problems of production systems including the control of purchased materials inventory; scheduling a job shop, batch, and continuous production processes for single and multi-product lines; planning of work force and inventory under seasonal and stochastic demand. Prerequisite or Corequisite: INEG 3813.

### INEG4563 Introduction to Simulation (Fa)

Elementary queuing models and applications. Discrete simulation techniques. The SIMNET simulation language. Applications of simulation to the design of industrial systems. Prerequisites: ELEG 2103 or ISYS 3393 or INEG 3833 or CSCE 1123. Pre or Corequisite: INEG 3433.

### INEG4633 Transportation Logistics (Fa)

Descriptive and analytical treatment of the critical design and modeling issues of the key transportation functions within the logistics system. Focus is on the storage and movement aspects of logistics in a firm.

### INEG4723 Ergonomics (Sp, Fa)

The capabilities and limitations of humans are addressed in the context of the person's interaction with machines and the environment. Topics of discussion include anthropometric considerations in equipment design, human sensory capabilities in the work environment, and work design and control. Prerequisites: ELEG 3903 or ISYS 3393 or INEG 3833 or CSCE 1123. Pre or Corequisite: INEG 4333.

### INEG4900 Industrial Engineering Design (Sp, Fa)

Comprehensive design project for an industrial enterprise; introduction to manufacturing processes and computer-aided engineering. Survey of electronic components, and the design and fabrication of assembly and assembly. Emphasis on manufacturing. Laboratory required. Corequisite: Lab component. Prerequisite: INEG 4723 and INEG 4333.

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**Industrial Engineering (INEG)**

HUMN4243 Women in Music and Art (Sp, Su, Fa)

A historical survey of art and music by women from Hildegard von Bingen (1098–c.1179) to Judy Chicago (1939–).

HUMN425V Colloquium (Irregular) (1-6)

An interdisciplinary, value-oriented discussion course. May be repeated for 6 hours.

HUMN4913 Honors Literary Reflections of the Holocaust (Sp)

Drawing on fiction, poetry, autobiography, and drama from works written originally in French, Polish, German, Dutch, English, and Yiddish, this course introduces students to the Holocaust through literature. Deals with the adequacy of imaginative literature in the face of atrocity, the comparative effectiveness of fiction versus autobiography, and the dangers of exploitation and trivialization.

HUMN4913 Literary Reflections of the Holocaust (Sp)

Drawing on fiction, poetry, autobiography, and drama from works written originally in French, Polish, German, Dutch, English, and Yiddish, this course introduces students to the Holocaust through literature. Deals with the adequacy of imaginative literature in the face of atrocity, the comparative effectiveness of fiction versus autobiography, and the dangers of exploitation and trivialization. (Same as WILT 4913)

HUMN4993 The City in American Art and Culture (Sp, Su, Fa)

An examination of the role of the city and the urban environment, including the city from colonial times to the present. May not be used to satisfy the art history requirement for art majors.

Selection and replacement of equipment and break-even points of operation; desirability of new processes or projects where the effects of learning and economies of scale are ignored; and fixed, differential, marginal, and sunk costs must be considered. Corequisite: Drill component. Prerequisite: MATH 2554.

INEG3513 Manufacturing Design and Processes (Fa)

Fundamentals of design and processes; the effects of manufacturing processes on process design and cost; engineering design and CAD as well as product inspection; and quality control. Engineering materials, production processes, and production systems include forging, metal machining, casting, and forming. Laboratory required. Corequisite: Lab component. Prerequisite: PHYS 2054.

INEG3613 Introduction to Operations Research (Sp)

Decision-making under uncertainty; application of latest electronic time study equipment. Laboratory required. Corequisite: Lab component. Prerequisite: ELEG 3903 or ELEG 2103 and INEG 3313 (or STAT 3013). (Same as ELEG 4273)

INEG4523 Automated Production (Sp)

Industrial robots and robot programming, industrial logic control systems, programmable controllers for the control of work stations, and conveyor systems. On-line computer control and microprocessors. Group technology, flexible manufacturing systems, and computer integrated manufacturing. Laboratory required. Corequisite: Lab component. Prerequisite: INEG 2513 or graduate standing.

INEG4533 Application of Machine Vision (Sp)

Automated machine vision applied to assembly and inspection tasks traditionally performed by human operators; development of application by acquiring image, processing image data, analyzing image and transmitting results; application, selection and economics. Laboratory required. Corequisite: Lab component. Prerequisite: senior standing.

INEG4543 Materials Handling (Sp, Su, Fa)

Equipment, systems, problems, and analysis of material handling, and emphasis upon computer systems, and the design of material handling systems. May be repeated for 3 hours.

INEG4623 Introduction to Simulation (Fa)

Elementary queuing models and applications. Discrete simulation techniques. The SIMNET simulation language. Applications of simulation to the design of industrial systems. Prerequisites: ELEG 2103 or ISYS 3393 or INEG 3833 or CSCE 1123. Pre or Corequisite: INEG 4333.

INEG4633 Transportation Logistics (Fa)

Descriptive and analytical treatment of the critical design and modeling issues of the key transportation functions within the logistics system. Focus is on the storage and movement aspects of logistics in a firm.

INEG4723 Ergonomics (Sp, Fa)

The capabilities and limitations of humans are addressed in the context of the person's interaction with machines and the environment. Topics of discussion include anthropometric considerations in equipment design, human sensory capabilities in the work environment, and work design and control. Prerequisites: ELEG 3903 or ISYS 3393 or INEG 3833 or CSCE 1123. Pre or Corequisite: INEG 4333.
Course Descriptions

Prerequisite: INEG 4543 and INEG 4623.

INEG5111 Industrial Engineering Graduate Seminar (Sp, Fa) (1-2) Required presentation by candidates for graduate degree in industrial engineering, graduate faculty, and guest lectures on design problems or new developments in the field of industrial engineering.

INEG5103 Industrial Engineering in the Service Sector (Irregular) Review of the development of industrial engineering into the service sector, e.g., health care systems, banking, municipal services, utilities, and postal service. Emphasizes the principles and methodologies applicable to the solutions of problems within the service industries. Prerequisite: graduate standing.

INEG513V Master’s Research Project and Report (Sp, Fa) (1-6) Required course for students electing the report option.

INEG514V Research and Special Topics (Sp, Su, Fa) (1-6) Fundamental and applied research. Prerequisite: graduate standing. May be repeated for 6 hours.

INEG5223 Safety and Health Standards Research (Irregular) For graduate students who seek Certified Professional or Certified Industrial Hygienist status, or both. Includes restudy and development of computer databases for standards, interpretations, court decisions, and field memoranda. Test equipment and procedures for determining indoor air and contaminant PEL concentrations and industrial environment metrics examined. Prerequisite: INEG 4223 or OMTG 4303. (Same as OMTG 5223)

INEG5313 Engineering Applications of Probability Theory and Stochastic Processes (Irregular) Probability theory; random variables and stochastic processes; distribution of sums, products, and quotients of random variables, with application to engineering, normal and Poisson processes; engineering applications of Markov chains; applications of queuing theory, and applications. Prerequisite: INEG 3313 or equivalent.

INEG5333 Design of Industrial Experiments (Irregular)Studies of principles and cases in engineering and industrial research; experiment design and analysis; probability, and response surface analysis. Prerequisite: INEG 4333 or equivalent.

INEG5343 Advanced Quality Control Methods (Irregular) Acceptance sampling by attributes; single, double, sequential, and multiple sampling plans; sampling plans; sampling plans of Department of Defense; acceptance sampling by variables; Bayesian acceptance sampling; rectifying inspection for lot-by-lot sampling; control charts; special devices; and procedures. Prerequisite: INEG 3313.

INEG5353 Engineering in Global Competition (Irregular) Objective of course: extend the student’s quality background into some of the state-of-the-art process control techniques and related current and classical research topics in the area of quality control. Rapidly increase student’s knowledge of the industrial quality function; identify potential M.S., Ph.D, funded, and publishable research topics. Prerequisite: INEG 5343.

INEG5423 Engineering in Global Competition (Irregular) Studies of principles and cases in engineering administration in global competition. Emphasis on high-technology manufacturing such as the electronics industry. Survey of markets, technologies, multinational corporations, cultures, and customs. Discussions of ethics, professionalism, diversity valuation, human relations skills, and other topics relevant to global engineering practice.

INEG5533 Decision Models (Even years, Fa) Overview of cost estimation techniques and methodologies applied to manufacturing and service organizations. Accomplished through detailed analysis of the cost estimation techniques and various cost estimation models. Topics include data collection and management, learning curves, activity based costing, detailed and parametric estimation models, and handling risk and uncertainty. Prerequisite: INEG 4553.

INEG5434 Decision Models (Odd years, Fa) Focus on quantitative and qualitative decision models and tech- niques for technical and managerial problems. Emphasis on application of decision models to real world problems. Topics include decision trees, influence diagrams, weighting methods, value of information, Analytical Hierarchy Process, Bayes Theorem, Monte Carlo simulation, utility theory, risk analysis, group decision making and expert systems. Prerequisite: INEG 3434 or equivalent.

INEG5553 Advanced Materials Handling (Irregular) Computerized offline planning and online control of materials handling systems. Specific topics include programmable controls, graphic simulations, and information systems. Emphasis on projects. Prerequisite: INEG 4543 or graduate standing.

INEG55523 Topics in Automated Systems (Irregular) Current developments in applications of automation to industrial processes. Robots, expert systems, artificial intelligence, control systems, design principles, computer interfaces, and vision systems. Prerequisite: INEG 4523.

INEG5613 Optimization Theory I (Fa) Basic solutions and bases in linear equations, matrix version of simplex tableaus, duality relations, sensitivity analysis, complementary slackness, revised simplex, interior point algorithms and improving search strategies. Prerequisite: Graduate standing.

INEG5623 Analysis of Inventory Systems (Irregular) Elements of production and inventory control, economic lot size models, price breaks models using Lagrangian method, deterministic dynamic inventory model, probabilistic one-period and multi-period models, zero and positive lead time models, and continuous review models. Prerequisite: INEG 5313.

INEG56533 Integer Programming and Combinatorial Optimization (Irregular) Gomory’s cutting plane algorithms, mixed integer problems, Glover-Young primal-feasible algorithms, convergence proofs, branch and bound algorithms, Land-Doig algorithm, Dakin’s algorithm, implicit enumeration, Balas zero-one algorithm, binary representation of integer programs, zero-one polynomial programming, the traveling salesman problem, quadratic assignment problem, and applications of integer programming. Prerequisite: INEG 5653 and MATH 3402.

INEG5643 Optimization Theory II (Irregular) Classical optimization theory, Lagrangian and Jacobian methods, Kuhn-Tucker theory and constraint qualification, duality in nonlinear problems, separable programming, quadratic programming, geometric programming, stochastic programming, steepness argument, convex combinations method, SUMT, Fibonacci search, and golden section method. Prerequisite: INEG 5313.

INEG5653 Modeling and Analysis of Semiconductor Manufacturing (Even years, Sp) Introduction to front end of semiconductor manufacturing process, wafer processing. Topics include an introduction to wafer processing, factory and equipment capacity modeling, automated material handling, simulation, cost modeling, and production scheduling. Prerequisite: INEG 5313.

INEG5663 Analysis of Queuing Systems (Irregular) Poisson axioms, pure birth and death model, queue disciplines (M/M/1 and M/M/c) models, machine scheduling model, Pollaczek-Khintchine formula, priority queues, and queues in computer systems (G/G/1) and (G/G/m) models, and bulk queues. Reneging, balking, and jockeying phenomena. Transient behavior. Prerequisite: INEG 5313.

INEG5673 Graphs and Network Theory (Irregular) Directed and undirected graphs; trees; network models; shortest route problems; maximal flow and minimal cut theorems; planar graphs; and duality theorem. Applications of networks and graphs to transportation, transshipment, assignment, plant layout, routing, scheduling, and tree problems. Prerequisite: INEG 3613 or INEG 5613.

INEG5713 Advanced Topics in Human Factors Engineering (Irregular) Advanced work in special research topics in man-machine systems. Prerequisite: INEG 4723.

INEG5723 Advanced Man/Machine System Design (Irregular) Continuation of INEG 5713.

INEG5823 Systems Simulation I (Su) Monte Carlo technique, construction of digital simulation models, time- keeping in simulations, design of simulation experiment, and statistical verification of results. Includes the use of simulation language such as ARENA. Prerequisite: CENG 1913 and INEG 3313 (or equivalent).

INEG5843H Honors Scheduling & Sequencing (Odd years, Sp) Focus on scheduling algorithms and various operations research approaches for solving sequencing and scheduling problems. The NP-completeness of most scheduling problems leads to a discussion of computational complexity, the use of heuristic solution methods, and the development of worst case bounds. Prerequisite: INEG 3613 and computer programming proficiency. (Same as INEG 5843H)

INEG600V Master’s Thesis (Sp, Su, Fa) (1-9) Designed for students who are interested in conducting original research in industrial engineering and related fields. Emphasis is on the formulation of mathematical models to solve practical problems; data collection and solution implementation. Students work in teams on actual problems observed in industry and government. Prerequisite: INEG 4623. Inaugural Project.

INEG6823 Systems Simulation II (Irregular) Advanced topics in computer simulation including experimental design, simulation optimization, variance reduction, and statistical output analysis techniques applied to discrete event simulation. Prerequisite: INEG 4623.

INEG6843 Scheduling and Sequencing II (Odd years, Sp) An investigation into constructive algorithms and various operations research approaches for solving sequencing and scheduling problems in a variety of machine environments (single-machine, parallel machines, flow shops, and job shops). Prerequisite: INEG 5843.

INEG700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Information Systems (ISYS)

ISYS2263 Introduction to Information Systems Development (Sp, Fa) This course presents the fundamental concepts used in developing information systems. It provides a framework for students to use throughout their software development coursework. Also includes management of information systems concepts. This course requires extensive use of computer systems. Prerequisite: WCOB 1023 and MATH 2003 each with a grade of "C" or better.

ISYS3133 Statistical Analysis (Irregular) (First offered Summer 2002, Formerly CISG 3133) Intermediate statistical inference for business decision making and research in business. Includes tests of hypotheses, sampling and experimental design, multiple regression and non-parametric statistical methods. Prerequisite: WCOB 1023 with a grade of "C" or better.

ISYS3253 Information Technology Infrastructure (Sp) (First offered Summer 2002, Formerly CISG 3253) This course teaches an understanding of architectural requirements for computer hardware, software, and network architectures including data communications, security, and Internet networking. It covers the functionality of the leading available technologies used in computing and networking environments. The student learns computer and data networking design and design approaches from a business-oriented perspective. Prerequisite: ISYS 2263 with a grade of "C" or better.

ISYS3293 Systems Analysis and Design (Sp, Fa) (First offered Summer 2002, Formerly CISG 3293) Critical analysis, and application of one structured analysis methodology; development of structured analysis specification; exposure to other methodologies; quality assurance and walkthroughs; survey of real systems and their components. Prerequisite: ISYS 2263 with a grade of "C" or better.

ISYS3333 Information Systems Management (Sp, Su, Fa) Management information systems concepts and technologies are presented. Emphasis is on the determination of decision information requirements for strategic programs and operating management levels. Examples of marketing, personnel, and financial systems are used. Decision models, computer graphics, database management, decision support, and expert systems as they relate to MIS and business applications are incorporated. Prerequisite: WCOB 1023.

ISYS3373 End User Computing (Sp) A computer applications course providing the tools necessary for manipulating, sharing, and presenting data to support business decision making. Topical coverage includes multiple applications linking, data analysis, and group decision support systems. Prerequisite: WCOB 1023 with a grade of "C" or better.

ISYS3393 Business Application Development in the Visual Basic Environment (Sp, Fa) (First offered Summer 2002, Formerly CISG 3393) Principles of design and development of windows applications using cutting-edge visual development tools included in Visual Studio. The programming language will be Visual Basic and its use in Windows applications and in conjunction with active server
pages and XML for web applications. Prerequisite: ISYS 2263 or CSCE 1023 or CSCE 1123, each with a grade of "C" or better.

ISYS3603 Production and Operations Management (Sp, Su, Fa) (First offered Summer 2002, Formerly CISQ 4633) Provides a broad conceptual framework for production and operations processes in organizations. views total operations within the environmental context and emphasizes quantitative tools for problem identification, analysis of alternatives, quality and the decision making process for organizations to achieve their goals. Prerequisite: ISYS 2013 and ISYS 2322 and ECON 2023.

ISYS4003H Information Systems Honors Colloquium (FA) Explores events, concepts and/or new developments in the field of Computer Information Systems and Quantitative Analysis. Prerequisite: Senior standing.

ISYS4133 E Business Development (Irregular) This course explores various e-business development technologies and then utilizes the technologies for developing a relatively realistic business-to-consumer (B2C) e-business site. Students will also learn about Business to Business (B2B) strategies, market exchanges, XML and XML Web services applications. Simple XML Web services will also be created. Prerequisite: ISYS 3393 or ISYS 4733 or CSCE 1123 with a grade of "C" or better.

ISYS4233 Seminar in ERP Development (Sp, Fa) ERP administration and system development practices. Advanced system support issues related to Enterprise Resource Planning systems that are used in global organizations. Being able to accurately capture and store business transactions is an essential requirement in many large companies with high volume processing, the tools of choice for transaction processing are CICS/Cobol/DB2. This course provides students with the necessary understanding and skills to work in this type environment. Prerequisite: ISYS 2263 or CSCE 1123 with a grade of "C" or better.

ISYS450V Independent Study (Sp, Fa) (1-3) Permits students on individual study to explore selected topics in data processing and/or Quantitative Analysis.

ISYS4933 Global Information Technology Management (Irregular) This course will focus on IT environments around the infrastructures, processes and regulatory regimes, global IT applications, global IS development strategies, global management support systems, and global IT management strategies. The course will include an in-depth understanding of information resources and their management strategies. Basic ABAP programming. In addition, students will learn how to provide basic systems administration support of the operating system, database, and application systems software levels or ERP systems. Prerequisite: WOCB 4213 and ISYS 4133 with a grade of "C" or better.

ISYS4943 Current Topics in Computer Information (Irregular) (First offered Summer 2002, Formerly CISQ 4433) Critical issues as they affect computing in organizations and for individuals. Prerequisite: WOCB 4213 with a grade of "C" or better.

ISYS4963 Business Applications of Data Systems (Fa) Introduces students to centralized information system design and implementation for business applications. Indepth study of logical systems modeling; physical file management; and software construction. Prerequisite: ISYS 3393. Prerequisite: ISYS 3293 with a grade of "C" or better.
italian (ITAL)

ITAL1003 Elementary Italian I (Fa)
ITAL1013 Elementary Italian II (Sp)

Corequisite: ISYS 5423 and ISYS 5933. This course is designed to provide an updated, comprehensive and rigorous treatment of the emerging global IT fields. It focuses on assessing and creating information and knowledge from internal and external sources to support business decision making process. In this seminar, data mining and information retrieval techniques will be used to extract useful knowledge from data, which could be used for business intelligence, and knowledge management. Prerequisite: ISYS 5503 and ISYS 5833.

ITAL1003 Intermediate Italian I (Fa) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: ITAL 1013 or equivalent.
ITAL2013 Intermediate Italian II (Sp) Continued development of basic speaking comprehension, and writing skills and intensive development of reading skills. Prerequisite: ITAL 2003 or equivalent.
ITAL3003 Italian Conversation (Fa) Prerequisite: ITAL 2013.
ITAL3013 Introduction to Literature (Sp) Development of reading skills and introduction to literary analysis. Prerequisite: ITAL 2013 or equivalent. May be repeated for 3 hours.
ITAL475V Special Investigations (irregular) (1-6) May be repeated for 6 hours.

Industrial & Tech Education (ITED)

ITED1401 Power and Energy Laboratory (Sp, Su, Fa) Laboratory exercises in principles and practices of power and energy. Corequisite: ITED 1403.
ITED495V Industrial Internship (Sp, Su, Fa) (1-12) In an actual industrial setting, the student will study management functions, organizational practices, product design, production fabrication, routing, quality control, work schedules, industrial relations, and humble expressions. topics include system theory, information system management, distributed data processing and communications, and technology. Prerequisite: ITED 6103.

Japanese (JAPN)

JAPN1013 Elementary Japanese I (Fa) JAPN1013 Elementary Japanese II (Sp) Elementary courses stress correct pronunciation, aural comprehension, and simple speaking ability, and lead to active mastery of basic grammar and limited reading ability. Prerequisite: JAPN 1003 or equivalent.
JAPN2003 Intermediate Japanese I (Fa) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: JAPN 1013 or equivalent.
JAPN2013 Intermediate Japanese II (Sp) Continued development of basic reading comprehension and writing skills and intensive development of reading skills. Prerequisite: JAPN 2003 or equivalent.

JOUR1023 Media and Society (Sp, Fa) A survey of mass media (newspaper, radio, TV, magazine, advertising, public relations, photography), and which stresses their importance in today's society and introduces the student to the various areas in journalism. Recommended for students considering journalism as a major. (Same as JOUR 1023).
JOUR1033H Honors Fundamentals of Journalism (Sp, Su, Fa) Introduces students to the skills of observation, critical thinking and concise writing required in all aspects of journalism, as well as to the technology needed in upper-level courses. Practice using references for grammar and journalistic style. Prerequisite to JOUR 2013, 2033, 2063 and 4143. Corequisite: lab component. (Same as JOUR 1033).
JOUR1033 Fundamentals of Journalism (Sp, Su, Fa) Introduces students to the skills of observation, critical thinking and concise writing required in all aspects of journalism, as well as to the technology needed in upper-level courses. Practice using references for grammar and journalistic style. Prerequisite to JOUR 2013, 2033, 2063 and 4143. Corequisite: lab component. (Same as JOUR 1033).
JOUR2013 News Reporting I (Sp, Fa) Intensive training in the methods of gathering and writing news. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: JOUR 1023 and JOUR 1033. (Same as JOUR 2013).
JOUR2031L Broadcast News Reporting I Laboratory (Sp, Fa) Provides experience in basic broadcast news reporting techniques. Laboratory 3 hours per week. Corequisite: JOUR 2033. (Same as JOUR 2031L).
JOUR2032 Broadcast News Reporting I (Sp, Fa) Intensive training in the methods of gathering and writing broadcast news. Lecture 2 hours per week. Corequisite: JOUR 2031L. Prerequisite: JOUR 2013 and JOUR 2031L.
JOUR2063 Media Technology (Sp, Fa) Introduction to computer skills required in journalism; focus is training in the major computer software used in the profession. Prerequisite: JOUR 1023 and JOUR 1033.
JOUR231L Photojournalism I Laboratory (Sp, Fa) Provides experience in photography lab techniques. Laboratory facilities are supplied. Laboratory 2 hours per week. Corequisite: JOUR 2333.
JOUR2332 Photojournalism I (Sp, Fa) Beginning course in the fundamentals of photography, including darkroom procedures, composition, and the use of cameras. Lecture 2 hours per week. Corequisite: JOUR 231L.
JOUR3001L Graphics of Journalism Laboratory (Sp, Fa) Hands-on training and experience in graphics design and production techniques. Laboratory 2 hours per week. Corequisite: JOUR 3000.
JOUR3002 Graphics of Journalism (Sp, Fa) Principles of typography, including elementary printing, make-up, type faces, design, and proofreading. Lecture 2 hours per week. Corequisite: JOUR 3001L.
JOUR3013 Editing (Sp, Fa) Theories and practices in news editing, copy editing, headline writing, page layout and the gathering and publication of written and pictorial journalism. Prerequisite: JOUR 2031L.
JOUR3023 News Reporting II (Sp, Su, Fa) Continuation of JOUR 2013. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: JOUR 2013.
JOUR 3013. JOUR 3061. Newspaper Graphics Laboratory (Sp, Su) Hands-on practice in techniques of newspaper design and production. Laboratory 2 hours per week. Corequisite: JOUR 3062.

JOUR 3071L. Broadcast News Reporting II Laboratory (Fa) Television studio production including producing, directing, teleprompter, character generation, audio, light, and camera operation. Produce weekly TV news program for broadcast. Corequisite: JOUR 3072. Prerequisite: JOUR 3071L. Corequisite: JOUR 3071L.

JOUR 3072. Broadcast News Reporting II (Sp, Fa) Advanced techniques in broadcast journalism including: covering beats; writing and interviewing; and producing news stories for broadcast. Corequisite: JOUR 3072. Prerequisite: JOUR 3072 and JOUR 3071L.

JOUR 3083. Photojournalism II (Sp, Su, Fa) Study of news and feature photography. Includes planning and shooting photographs for newspapers and magazines, photojournalistic techniques, and other aspects of photographing for publication. Lecture 3 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: JOUR 2332 and JOUR 2331.

JOUR 3093. Web Design for Journalism, Advertising & Public Relations (Sp) Course covers basic UNIX and HTML, and leading web design software. Major focus on journalistic informational and commercial sites; minor focus on personal pages. Prerequisite: JOUR 2063.

JOUR 3123. Feature Writing (Sp, Su, Fa) Study of non-fiction newspaper and magazine feature articles with emphasis on locating subjects, and on writing techniques and practice in article writing. Prerequisite: JOUR 2013.

JOUR 3132. Editorial Writing (Sp, Su, Fa) Study of the opinion media. Includes analysis of editorial writing, the newspaper/editorial opinion columns, letters from readers, and broadcast commentary. Prerequisite: JOUR 2013 or JOUR 2032) and junior standing.

JOUR 3163. Sports Journalism (Fa) Emphasis on techniques and principles of coverage of sports and sports-related subjects on and off the field, and on the relationship between sports and the mass media. Prerequisite: JOUR 3353. Constitutional guarantees, statutory laws and court cases applicable to mass communications. Prerequisite: junior standing.

JOUR 3723. Advertising Principles (Sp, Fa) Introductory course to the broad field of advertising. The course includes a study of the role of advertising in modern society with emphasis being given to the extent and manner of use of advertising in newspapers, magazines, radio, television, and other media. Prerequisite: Junior standing and 2.25 overall grade point average.

JOUR 3743. Public Relations Principles (Sp, Fa) Study of ethics of public relations in modern society, business, and communications. Influencing opinion through acceptable performance and 2-way communication. Recommended for students in many fields. Prerequisite: Junior standing and 2.25 overall grade point average.

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Course Descriptions

KINS4564 Current Trends and Issues in Athletic Training (Sp) An examination of the athletic training profession and the critical thinking and decision making skills necessary for data collection for sports analysis. Provides valuable information on instrumentation used specifically in biomechanics. Prerequisite: KINS 5533.

*KINS5533 Evaluation Techniques of Athletic Injuries - Upper Extremity (Sp) Use of scientific assessment methods to recognize and evaluate the nature and severity of athletic injuries to the upper extremities, trunk, and head. Prerequisite: admission to graduate athletic training program.

KINS5537 Evaluation Techniques of Athletic Injuries - Lower Extremity (Fa) Use of scientific assessment methods to recognize and evaluate the nature and severity of athletic injuries to the hip and lower extremities. Prerequisites: admission to graduate athletic training program.

KINS5542 Assessment and Prescriptive Programming in Adapted KINS (Sp) Instruction in the assessment, prescription, and use of instruction methods, materials, and equipment relevant to specific handicapping conditions in the adapted physical education setting.

KINS5543 Perceptual-Motor Development and Clinical Application (Irregular) In-depth examination relevant to specific handicapping conditions in the adapted physical education setting.

KINS5546 Therapeutic Exercise and Rehabilitation of Athletic Injuries (Fa) A systematic approach to examine program development, techniques, indications and contraindications, of exercise, and progression as related to athletic injury, prevention, and return to play guidelines. Prerequisite: admission to graduate athletic training program.

KINS5549 Administration in Athletic Training (Su) Administrative components of athletic training. Basic concepts of legal liability, leadership and management principles, financial management, day to day scheduling and supervision, maintenance, and general administration. Prerequisite: admission to graduate athletic training program.

KINS5548 Medical Conditions in Athletic Training (Fa) This course will provide a collection of knowledge, skills, and values that the entry-level certified athletic trainer must possess to recognize, treat, and refer, when appropriate, the general medical conditions and disabilities of athletes and others involved in physical activity. Prerequisite: admission to the graduate athletic training program or permission of instructor.

KINS5549 Practicum in Adapted Physical Education (Irregular) Development of knowledge, skills, and concepts necessary for planning, organizing and conducting adapted physical education programs through supervised field experiences.

KINS5551 Physiology Exercise I (Fa) A study of the foundation literature in exercise physiology. Emphasis is placed on the muscular, cardiovascular, and respiratory systems.

KINS5553 Muscle Metabolism in Exercise (Even Years, Sp) A study of the metabolic changes that occur in muscle as a result of exercise, exercise training, and other stressors. Prerequisite: KINS 5513 or equivalent.

KINS5563 Cardiac Rehabilitation Program (Sp) An examination of the concepts, design, and implementation of cardiac rehabilitation programs. Emphasis on exercise programs but reference to nutrition, psychology, and other health interventions.

KINS5563 Cardiovascular Function in Exercise (Odd Years, Sp) Study of the effects of exercise training and other stressors on the cardiovascular system. Detailed studies of the components of the cardiovascular system and the responses and adaptations of those components to selected stimuli. Prerequisite: KINS 5513 or equivalent.

KINS5593 Practicum in Laboratory Instruction in Evaluation (Su, Fa) Experience in teaching and evaluating human motion. Prerequisite: KINS 5533.

KINS5595 Practicum in Laboratory Instruction in Science (Su, Fa) Experience in teaching and evaluating human motion. Prerequisite: KINS 5533.

KINS560V Workshop (Irregular) (1-3) May be
LAST470V Special Topics (Irregular) (1-6) An examination of pertinent issues in Latin America. May be repeated for 99 hours.

Latin (LATN)

LATN1003 Elementary Latin I (Fa) The rudiments of classical Latin, with concentration on grammar, vocabulary, and syntax. Short selections from ancient authors lead to basic reading ability.

LATN1013 Elementary Latin II (Sp) A continuation of the rudiments of classical Latin, with concentration on gram- mar, vocabulary, and syntax. Short selections from ancient authors lead to basic reading ability. Prerequisite: LATN 1003 or equivalent.

LATN2013 Catullus (Sp) Development of reading skills through selections from Catullus’ poems, and an intro- duction to the culture and history of the late republic through critical study of Catullus in translation and secondary works. Prerequisite: LATN 2013 or equivalent. (Same as LATN 2013I)

LATN3003 Virgil and Ovid (Fa) Selections from the Aeneid and/or the Metamorphoses, and an introduction to Roman literary history through the critical study of these works in translation. Prerequisite: LATN 2013 or equivalent.

LATN3013 Caesar (Sp) Selections from Caesar’s commentaries on Gallic or Civil Wars, and an over- view of Republican political and military history through the critical study of the commentaries in translation and secondary works. Prerequisite: LATN 3003 or equivalent.

LATN3063 Intensive Elementary Latin Reading (SU, IR) Overview of Latin grammar, vocabulary and syntax, leading to reading prose texts. For undergraduates who want short, intensive introduction to Latin and graduate students working towards reading proficiency. Successful completion fulfills graduate student research reading proficiency requirement. LATN 3063 alone cannot fulfill FLAN efficiency requirement. LATN 3063 alone cannot fulfill FLAN efficiency requirement. LATN 3003 alone cannot fulfill FLAN efficiency requirement.

LATN4013 Roman Satire (Irregular) Selections from the satires of Horace, Juvenal, Persius, or Seneca. An overview of Roman Histonography through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent.

LATN4023 Roman Didactic Epic (Irregular) Selections from Virgil’s Georgics, Lucrèce’ De Rerum Natura, or Manilius’ Astronomica. An overview of Roman philosophical Epic through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent.

LATN4033 Roman Drama (Irregular) Selections from Plautus, Terence, or Seneca. An overview of Roman theater through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent.

LATN4043 Roman Elegy (Irregular) Selections from Propertius, Tibullus, and Horace, including an overview of the genre through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent.

LATN4063 Roman Pastoral and Lyric (Irregular) Selections from Catullus, Virgil’s Elegies, Horace’s Odes, or Calpurnius Siculus. An overview of the two genres through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent. May be repeated for 6 hours.

LATN4073 Roman Novel (Irregular) Selections from Petronius or Apuleius. An overview of the genre through the critical study of complete works in translation and secondary works. Prerequisite: LATN 4063 or equivalent.

LATN4083 Roman Oratory (Irregular) Selections from the orations and theoretical works of Cicero, Seneca the Elder, or Quintilian. An overview of the genre through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent. May be repeated for 6 hours.

LATN4093 Roman Philosophy (Irregular) Selections from the philosophical works of Cicero or Seneca. An overview of Roman philosophy through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent. May be repeated for 6 hours.

LATN4153 Roman Narrative Epic (Irregular) Selections from Virgil, Ovid, Lucan, Statius, or Silius Italicus. An overview of the genre through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent. May be repeated for 6 hours.

LATN475V Special Investigations (Irregular) (1-6) May be repeated for 99 hours.

LATN5633 Medieval Latin (Irregular) Selections from medieval writers from the 4th to the 17th century. May be repeated for 99 hours.

Law (LAWW)

LAWW400V Entertainment Law (Irregular) (1-6) Examines the legal principles and relationships of the entertain- ment industry, with a primary emphasis on the music industry; provides an introduction to the practice of entertain- ment law and the negotiation of entertainment contracts; covers a variety of legal issues that arise when representing clients in the entertainment industry.

LAWW4012 Legal Research & Writing II (Sp, Su, Fa) An introduction to the persuasive writing for trial and appellate courts. Emphasis will be placed on research and writing techniques, basic legal research using computers. Students will also engage in brief-writing and appellate argumentation.

LAWW4013 Legal Research & Writing I (Sp, Su, Fa) An introduction to the special problems posed by the legal analysis and the expression of the results of that process. The primary emphasis will be on basic legal analysis techniques, basic legal writing skills, and proper citation form. Students will complete a series of writing assignments.

LAWW4022 Legal Research & Writing III (Sp, Su, Fa) Small section experience (15 students per section) in legal research and writing; advanced legal research tech- niques and advanced writing assignments. Must be taken in the 3rd or 4th semester.

LAWW4023 Contracts I (Sp, Su, Fa) Formation and enforcement of contracts and property against physical harm, whether intentional or negligent, under a variety of doctrines; trespass, nuisance, negligence, conversion, and privacy. It also covers appropriations by deceit in sales and credit transactions and abuses of personal interests, in defamation. A number of fundamental Anglo-American legal principles, such as duty, proximate cause, foreseeability, privi- lege, damages, injunctions, functions of the advocate, trial judge, and appellate court and the development of the liability of builders, contractors, workmen, manufacturers, dealers, railroads, and operators of motor vehicles.

LAWW4053 Property I (Sp, Su, Fa) Emphasis is on real property. Basic concepts are covered, including property rights in lost and found articles (general property concepts), types and historical origins of estates, and other interests in land. Property transfer techniques, such as gifts, wills, intestacy and tenancy, are also covered. Certain aspects of property law are discussed. Land transfer techniques, including the land sale contract, the deed, the recording system, and methods of real property title assurance are discussed. Certain aspects of liens and landlord and tenant law are also considered.

LAWW4073 Criminal Law (Sp, Su, Fa) Deals with the questions of what conduct society punishes through a criminal code and the appropriate punishment for the for- mer. The course includes an analysis of the theories of punishment, the definitions of various crimes, the defenses available to one charged with criminal conduct, and the limitations placed by the Constitution on...
governmental power in the criminal law area. Throughout the course, special emphasis is placed on the appropriate role of the law in a free society, and the problems created by them in devising and administering a criminal code.

LAW4103 Civil Procedure I (Sp, Su, Fa) Study of the process of civil litigation from such preliminary matters as court selection and jurisdiction to appeal and collateral attack of final judgments. Some attempt is made to cover the antecedents of modern procedure; where appropriate, suggestions for reform are developed in class discussion. Emphasis is placed on the Federal Rules of Civil Procedure and on code pleading and common law procedure used in state court systems.

LAW4142 Torts B (Sp, Su, Fa) Tort law governs the protection of persons and property against physical harm, whether intentional or negligent, or under a variety of doctrines; trespass, nuisance, negligence, conversion, and privacy. It also covers appropriations by deceit in sales and credit transactions and abuses of personal interests, in defamation. A number of fundamental Anglo-American legal principles, such as duty, proximate cause, foreseeability, privilege, damages, injunctions, functions of the advocate, trial judge, and appellate court are developed in the context of the liability of builders, contractors, workmen, manufacturers, dealers, railroads, and operators of motor vehicles.

LAW4153 Property II (Sp, Su, Fa) Emphasis is on real property. Basic concepts are covered, including property rights in lost and found articles (general property concepts), types and historical origins of estates, and other interests protected, water rights, water quality and water quantity issues, such as gifts, leases (landlord and tenant), and the sale of land are also considered. Land transfer techniques, including the land sale contract, the deed, the recording system, and methods of real property conveyance are discussed. Certain aspects of land use control are explored briefly.

LAW4173 Criminal Procedure (Sp, Su, Fa) Concerned with legal steps through which the process of proceeding properly occurs, commencing with the initial investigation of a crime and concluding with the release of the defendant. Does not deal exclusively with constitutional problems, although considerable time is spent on them. Recent Supreme Court decisions are discussed. Criminal Procedure does not deal with criminal tactics or with many of the special problems relating to the introduction of evidence at the trial.

LAW4203 Civil Procedure II (Sp, Su, Fa) Study of the process of civil litigations from such preliminary matters as court selection and jurisdiction to appeal and collateral attack of final judgments. Some attempt is given to cover the antecedents of modern procedure; where appropriate, suggestions for reform are developed in class discussion. Emphasis is on the Federal Rules of Civil Procedure and on code pleading and common law procedure used in state court systems.

LAW4294 Business Organizations (Sp, Su, Fa) Course is constructed around different forms of business organizations, with emphasis on agency and partnership law, and corporations law.

LAW4442 Law & Accounting (Irregular) Study of basic accounting principles and their importance to attorneys engaged in business related activities. Topics covered include the fundamental accounting equation, the nature of accrual accounting, understanding financial statements, and account for assets and liabilities. Also a review of basic principles associated with financial statement analysis and valuation principles. Intended for students with little or no business training, and may not be taken for credit by students who have previously earned 6 or more hours of undergraduate or graduate credit in accounting courses.

LAW4945 Legal Office (Sp, Su, Fa) Develops fundamental lawyer's skills using role-play in simulation exercises that are videotaped and critiqued. Focuses on development of case theory, fact gathering, use of discovery and summation techniques. Prerequisite: successful completion of Civil Procedure I, Civil Procedure II, and Criminal Procedure.

LAW500V Special Topics (Sp, Su, Fa) (1-18) Includes diverse topics; may be a variety of course offerings. Courses dealing with agricultural law topics not included elsewhere in the curriculum. Most of the Special Topics courses will be taught by agricultural law experts and scholars from around the nation and from other countries. May be repeated for 18 hours.

LAW5013 Professional Responsibility (Sp, Su, Fa) Role of the lawyer as counselor, advocate, and public servant; obligation to society of the individual lawyer and the profession as a whole; ethical problems of the profession; representation of the unpopular cause and the desirable client; the lawyer's obligations to law reform; lawyers' duties to the lawyer in public service; the aspects of law office management.

LAW5023 Remedies (Sp, Su, Fa) Covers equity (jurisdictional powers of courts of equity, injunctions, including adequacy of legal remedies, balancing of equities, interests protected, and defenses), damages (compensatory, exemplary, and nominal damages; direct and consequential damages; mediation; special application in contract and tort actions) and restitution (relief afforded by the judicial process, to prevent unjust attention of benefits).

LAW5024 Remedies (Sp, Su, Fa) Covers equity (jurisdictional powers of courts of equity, injunctions, including adequacy of legal remedies, balancing of equities, interests protected, and defenses), damages (compensatory, exemplary, and nominal damages; direct and consequential damages; mediation; special application in contract and tort actions) and restitution (relief afforded by the judicial process, to prevent unjust attention of benefits).

LAW5033 Pension and Benefit Law (Sp, Su, Fa) Basic introduction to selected areas of the law applicable to private pension and employee benefit plans, including basic principles, regulation, fiduciary duties, taxation and plan termination.

LAW5043 State and Local Government (Sp, Su, Fa) Study of units of local government and their relationships to state and federal government; territorial composition; employee relationships; sources of revenue of local units; and powers, duties, immunities, and activities of cities and towns. Not offered every year.

LAW5063 Education Law (Sp, Su, Fa) Study of law as it applies to public education in America, including the theories of constitutional interpretation; the role of students and teachers, school financing, equal opportunity in education.

LAW5072 DOMESTIC RELATIONS (Sp, Su, Fa) DEVoted primarily to the problems generated by family relationships. There is a large section on formation and dissolution of marriage. Substantial time is also given to property and support obligations toward and of children, custody, adoption, guardianship, general property law as it is affected by family relationships, and divorce and custody in the federal system (focusing primarily on enforceability of degrees in one state by courts sitting in another state).

LAW5083 First Amendment (Sp, Su, Fa) An intensive examination of the legal issues arising under the First Amendment to the United States Constitution, with an emphasis on basic free speech doctrines and the dilemma posed by interplay between the free exercise and establishment clauses.

LAW5089 Solo Practice Planning (Sp, Fa) Combines elements of professional responsibility and law practice management. This course will satisfy the skills requirement.

LAW5110 Law: Study Abroad (Sp, Su, Fa) Open to law students studying abroad in officially sanctioned programs.

LAW5114 Constitutional Law (Sp, Su, Fa) An introduction to the basic principles of constitutional law and to current constitutional doctrines and problems. The primary focus will be on the structure of the federal system and on the rights of individuals under the Due Process and Equal Protection clauses of the Fifth and Fourteenth Amendments.

LAW5123 Legislation (Sp, Su, Fa) Basic introduction to constitutional principles applicable to the legislative process (appointments, qualifications for office, and lobbying regulations); procedures for legislative enactment; the construction of statutory enactments; and the construction of statutory enactments. Not offered every year.

LAW5133 Real Estate Transactions (Sp, Su, Fa) Focuses on real estate transfer, real estate finance and real estate development. Issues relating to the sale of land and conveyances of real property, mortgages and the planning, financing, constructing and marketing of modern real estate developments.

LAW5153 The Economics of Agricultural Policy (Sp, Su, Fa) LAW5163 Administrative Law (Sp, Su, Fa) Course introduces students to the regulatory process, with some state examples. Considers the origin and constitutional basis for the administrative process; executive and legislative controls with particular emphasis on the judicial "control" of the administrative process (delegations, provisions, dural and substantive due process, judicial assistance and enforcement and review of administrative decisions).

LAW5167 Insurance (Sp, Su, Fa) An examination of the law relating to insurance, including the regulation of insurance, and the regulation of insurance. This course will satisfy the skills requirement.

LAW5183 Drafting Legal Documents (Irregular) Will study and practice the principles applicable to drafting of non-litigation documents, such as contracts, wills, and legislation. These include organization and categorization of information, definitions, testing of substantive principles for completeness and consequences, and choices and precision of language.

LAW5203 Discrimination in Employment (Sp, Su, Fa) An examination of federal constitutional, statutory, and administrative restrictions that prohibit or limit employers, unions and employment agencies from discriminating on the basis of race, sex, religion, age, national origin and color. In addition to the substantive scope of federal law, emphasis is given to enforcement procedures and remedies.

LAW5213 Business Planning (Sp, Su, Fa) Synthesis of legal principles dealing with taxation and form of business organizations to provide guidance in forming and operating business entities.

LAW5223 Interviewing, Counseling, and Negotiation (Sp, Su, Fa) Develop fundamental lawyer's skills, using role-play in simulation exercises that are videotaped and critiqued. Focus is on interpersonal dynamics, client representation, techniques for fact investigation, and creative decision making. This course will satisfy the skills requirement.

LAW5242 Business Law: Select Topics (Sp, Su, Fa) Seminar focusing on areas of current concern and issues that are emerging in the area of business law. Specific topics may vary from year-to-year.

LAW5243 Business and Commercial Torts (Irregular) Course will explore the legal relationship between competition and intangible property. Covers the spectrum of private remedies for competitive wrongs. Course will also consider the laws relating to such torts and unfair competition, misappropriation of trade secrets, trademark infringement, false advertising, etc. Course is designed for students planning to practice in the areas of commercial, corporate, business or intellectual property law.

LAW5252 Agency, Partnership, and LLC (Sp, Su, Fa) Deals primarily with the special contract and tort problems that arise when one or both of the interested parties is doing business through the use of employees or under a partnership form of business organization. Consideration is given to the various legal problems that arise when a partnership is brought to an end, and what rights of the partners might be avoided or mitigated through proper planning.

LAW5262 Administrative Law (Sp, Su, Fa) Examines statutes that provide public access to government records and meetings in Arkansas and in a federal context. Because the state and federal governments hold vast quantities of information about their citizens, access to this data raises a number of policy questions that affect the manner in which the statutes are constructed and applied. Apart from the statutory framework, other questions will also be considered, such as the right to privacy, the emergence of a First Amendment right of access to government information, and the impact of the Internet.

LAW5273 Corporations (Sp, Su, Fa) A basic focus on corporation law including the process of organization of the corporation, distribution of corporate power, duties and liabilities of officers, directors and shareholders, the sale of shares, dividends, and other aspects of the internal affairs of the business.

LAW5282 Products Liability (Sp, Su, Fa) A course which introduces tort law topics that have received widespread attention. Coverage includes theories of product defect (manufacturing, marketing, and design defects), proof of causation, damages, federal pre-emption of state law claims, and special features relating to product liability. Course requirements are typically may be fulfilled by either a paper or an examination.

LAW5303 International and Domestic Sales and Leasing (Sp, Su, Fa) Study of Articles 2 and 2A of the Uniform Commercial Code. Coverage includes the Convention on Contracts for the International Sale of Goods”.

LAW5304 Uniform Commercial Code (Sp, Su, Fa) A basic overview of Articles 2, 3 and 9 of the Uniform Commercial Code covering sales, commercial paper and...
Course Descriptions

**LAWW3313 Negotiable Instruments (Sp, Su, Fa)** Study of Article 2 of the Uniform Commercial Code dealing with negotiable instruments.

**LAWW3322 Remedies of Unsecured Creditors (Sp, Su, Fa)** Emphasis on statutory, unilateral remedies for general unsecured creditors (post-judgment), including provision writs, statutory liens, and the process of prosecution. Includes rights of debtors whose property is the object of general creditor's remedies.

**LAWW113 Student Law (IR) (1-3)**

**LAWW3342 Credit Systems (Sp, Su, Fa)** Legal relationships and problems in the use of general and special purpose credit cards; special protection for consumers in credit transactions (including fraudulent transfers); Truth in Lending; and a brief introduction to financial institutions and bank collection.

**LAWW3363 Securities Regulation (Sp, Su, Fa)** Regulation of issuance of and trading in stocks, bonds and other security by federal and state agencies, with particular reference to the SEC. Not offered every year.

**LAWW3382 Uniform Commercial Code Seminar (Sp, Su, Fa)**

**LAWW4333 Government Contracts (Sp, Su, Fa)**

**LAWW5504 Decedent’s Estates (Sp, Su, Fa)**

**LAWW550V Decedents’ Estates (Sp, Su, Fa) (3-4)** Includes the traditional areas of wills and trusts (inter alia as well as testate and intestate). The trust area includes both the private trust and the charitable trust. Taxation problems are not covered in any depth, being reserved for the course on estate and gift taxation.

**LAWW5613 Relations in the Private Sector (Sp, Su, Fa)** The right to organize; organization of labor unions; strikes; picketing; boycotts; collective bargaining; collective labor agreements and their enforcement; unfair labor practice by employers; the union member and his union; state labor relations legislation; the National Labor Relations Act and the Labor Management Relations Act. Not offered every year.

**LAWW5553 Military Law (Sp, Su, Fa)**

**LAWW5594 Debtor-Creditor Relations (Sp, Su, Fa)** Study of Article 9 of the Uniform Commercial Code and of the Uniform Fraudulent Transfer Act.

**LAWW6003 Law and Medicine (Sp, Su, Fa)** An examination in the role of the law in determining access to and regulation of the quality of services provided by the health care industry. Principles and processes involved in medical malpractice litigation and alternative forms of dispute resolution will be a central concern. Attention will be given to the analysis of the rights of physicians in diverse contexts, including staff privileges, peer review, and courts. Selected current consumer problems will be discussed among them, patient’s rights to medical records, the functions of state medical boards, barriers to informed consent, and the impact of government cost-containment programs upon the poor and elderly.

**LAWW6013 Alternative Dispute Resolution (Sp, Su, Fa)** Deals with the alternative to formal litigation for resolving controversies. The alternative methods include mediation, negotiation, and arbitration. Special topics to be covered include negotiation, mediation and conciliation, arbitration, "rent-a-judge," and other special procedures. Areas of application include contract and tort disputes, community property, labor relations, and medical practice controversies. This course will satisfy the skills requirement.

**LAWW602V Independent Legal Research (Sp, Su, Fa) (1-3)** Independent legal research conducted under the supervision of faculty members. Ordinarily a student may not accumulate more than two semester hours of credit for Independent Legal Research. This cumulative maximum may be exceeded only by special permission of the dean, who in exceptional circumstances may approve a cumulative maximum credit of three semester hours of credit for Independent Legal Research.

**LAWW603V Federal Jurisdiction (Sp, Su, Fa) (1-3)**Topics covered usually include constitutional limits on the jurisdiction of Federal courts as well as limitations imposed by Congress. The relations between state courts are problems in diversity and Federal question jurisdiction. Removal procedure is also explored. Fed. per. Atty. fees, attention is given to venue and related issues.

**LAWW6042 Children and the Law (IR)** Topics include children as legal persons, including minors’ rights to express personal desires; custodial arrangements for siblings and their participation in decision-making in legal contexts; children’s rights and school authority, including constitutional issues in school discipline and religious expression; foster care; termination of parental rights; and adoption.

**LAWW6043 Corporate Finance (Sp, Su, Fa)** Study of basic issues relating to how corporations finance their operations overall. Includes an introduction to valuation, bankruptcy, and corporate accounting, focusing on basic balance sheets; a review of statutory rules applicable to dividends and other distributions; the study of issues concerning securities issued by corporations, including the role of underwriters and debt securities such as bonds and debentures; and the study of mergers, other corporate combinations, takeovers, and takeover defenses. It is also recommended that students in this course gain exposure to Advanced Corporations be taken first. Prerequisite: Business Organizations.

**LAWW6053 Agricultural Law (Sp, Su, Fa)** Topics to be covered include: an introduction to economic regulation of agriculture; state and federal regulation of the farming industry; Farmers Home Administration issues; farm leasing; regulation of grain elevators; farm commodity storage and sales contracts; farm operational financing; leasing of farm equipment and livestock; insolvency of buyers of farm products; regulation of the livestock industry; livestock transactions; commodity futures contract; agricultural cooperatives; farm labor problems; soil and water management, including irrigation and drainage; farm land preservation. Not offered every year.

**LAWW6063 Advanced Evidence (Sp, Su, Fa)** Deals with the use of expert witnesses, forensic sciences and scientific evidence, organization of proof, burden of proof, presumption of law, identification of a person, and the rules relating to hearsay evidence.

**LAWW607V Conflict of Laws (Sp, Su, Fa) (2-3)** Study of the legal principles involved in problems which have connections with two or more states requiring a choice of law, choice of law in federal courts, and jurisdiction in multi-state situations.

**LAWW6083 Arkansas Civil Practice (Sp, Su, Fa)** A detailed examination of the areas of Arkansas civil practice. Topics will include: the basic course of civil procedure; the methods by which items of evidence and admission or exclusion of relevance, real evidence, testimonial proof, hearsay and its exceptions.

**LAWW6103 Jurisprudence (Sp, Su, Fa)** Study of the ideas and methods of law, regardless of particular questions that might be resolved by law.

**LAWW6112 Labor Relations in the Public Sector (Sp, Su, Fa)** Historical development of labor organizations among public employees; the right to form and join unions; determination of the appropriate unit and establishment of the collective bargaining relationship; the rules to be drawn and its scope; union collective actions; the settlement of collective bargaining impasses; union security and public employment; the administration of the collective bargaining agreement. Not offered every year.

**LAWW6133 Antitrust Law (Sp, Su, Fa)** Federal anti-trust laws and their relationship to concentrations of economic power in the contexts of monopoly mergers, price fixing, economic boycotts and discrimination, re-sale price maintenance, dealer franchises, and exclusive dealing.

**LAWW6134 Taxation and Gas (Sp, Su, Fa)** Study of the law of oil and gas with emphasis on the interests that may be created in oil and gas, the rights of the landowner, provisions in the oil and gas lease, the rights of assignees, and legislative and regulatory control of oil and gas activities.

**LAWW614V Board of Advocates Credit (Sp, Su, Fa) (1-3)** Members of the Board of Advocates may receive ungraded academic credit, to be awarded in the spring semester of the junior year, upon completion of duties for the fall and spring semesters.

**LAWW6152 Elder Law Seminar (Sp, Su, Fa)** In-depth treatment of selected problems of elderly persons in seminar format.

**LAWW6153 Elder Law (Sp, Su, Fa)** A survey of important legal issues that affect the elderly. Areas of investigation include: aging patterns and statistical profiles of the elderly; the right of the elderly to benefits; age discrimination in employment; health care financing; health care decision-making; abuse and neglect of the elderly.

**LAWW6161V Law Review Credit (Sp, Su, Fa) (1-4)**

**LAWW6173 Future Interests (Sp, Su, Fa)**

**LAWW6182 Advanced Torts: Dignitary and Economic Harm (Irregular)** Course will cover delmas and other economic and social institutions, with particular attention given to the economic and social institutions.

**LAWW6185 Journal of Food Law & Policy Credit (Irregular)** Students receive credit for completion of duties on the Law School’s publication of The Journal of Food Law & Policy.

**LAWW6192 Workers’ Compensation (Sp, Su, Fa)** Focus will be on areas of current concern and issues that are emerging in the course of their employment. Not offered every year.

**LAWW6193 Social Legislation (Sp, Su, Fa)** Examination of the various statutes (exclusive of the employment discrimination laws) governing the rights and responsibilities of employees and employers, including unemployment legislation, COBRA, EPPA, ERISA, FLSA, OSHA, UNION, and others.

**LAWW6203 Trial Advocacy (Sp, Su, Fa)** An introduction to actual trial work and trial techniques through simulated exercises and the conduct of a mock trial. This course satisfies the skills requirement.

**LAWW6213 Product Liability (Sp, Su, Fa)** An intensive study of the area including a review of the theories of liability; the concepts and product defect; potential defendants; defenses; problems of information privation and publicity, harm to family relationships, malicious prosecution and interference with common law civil rights.

**LAWW6215 Journal of Business Law Credit (Sp, Su, Fa)** Focus will be on the various economic and social institutions.

**LAWW6231 Product Liability (Sp, Su, Fa)** Focus will be on the various economic and social institutions.

**LAWW6232 Federal Income Taxation of Individuals (Sp, Su, Fa)** Fundamentals of the federal income taxation of individuals. Topics covered include gross income, deductions, assignments of income, tax, taxation of property transactions, and tax accounting.

**LAWW6243 Federal Estate and Gift Taxation (Sp, Su, Fa)** Fundamentals of the federal estate and gift transfer tax system. Topics covered include determination of gifts for tax purposes, amounts included in decedents’ gross estates, valuation, deductions and credits.

**LAWW6245 Federal Income Taxation of Business Entities (Sp, Su, Fa)** Focus will be on the various economic and social institutions.

**LAWW6262 Estate Planning (Sp, Su, Fa)** Study of the role of lawyers (including ethical considerations) in fact gathering and analysis of data; testamentary and probate transfers; planning for incapacity; Medicaid, income tax, and transfer tax considerations in small and large estates; gift techniques; planning for the surviving spouse; revocable and irrevocable trusts; life insurance; disposition of business interests; and post-mortem tax planning. Unless waived by the instructor, prerequisite for taking the course shall be successful completion of either Decedents’ Estates or Federal Estate and Gift Taxation.

**LAWW6272 Federal Income Taxation of Trusts (Sp, Su, Fa)** Focus will be on the various economic and social institutions.

**LAWW6293 Advanced Corporations (Sp, Su, Fa)** Classical corporations law. Formation of corporations, duties and powers of corporate management, corporate control, shareholders’ rights, shares, dividends, derivative suits, fundamental changes and dissolution.

**LAWW6303 WTO, NAFTA, and EU Law (Irregular)** The problem of doing business abroad considered from both the economic and social institutions.

**LAWW6313 AIDS and the Law (Sp, Su, Fa)** Survey of the legal problems arising out of the spread of the disease known as AIDS.
LAWW632V Poverty Law: Theory and Practice (Irregular) (1-6) History of anti-poverty programs, the constitutional requirements for such programs, and legal and administrative characteristics of major American income-maintenance programs. Topics include the structure of programs, discretion, the protections of clients, social reform groups, etc. Prerequisite: LAW 5113.

LAWW633V Intellectual Property (Irregular) (2-3) This course involves an introductory survey of topics in intellectual property, including copyright, trademark, patent, and unfair competition issues. If time permits, the course may also cover certain aspects of e-commerce.

LAWW6343 Conflict Resolution (Regular) Explores methods utilized in the legal profession for resolving disputes by participation in simulation exercises designed to identify and apply processes. Class readings/discussion on theory and practice will be followed by student simulations. Designed for second and third year law students.

LAWW6352 Federal Income Taxation of Partnerships (Sp, Su, Fa) Focus on tax issues in partnership formation and operation, partnership distributions, liquidation, and transfer of partnership interests.

LAWW6373 Legal Clinic (Federal Practice) (Sp, Su, Fa) Students receive clinical legal experiences in federal courts and before federal administrative agencies. Although cases vary (Chapter 7 asset bankruptcies and farm foreclosures are often emphasized).

LAWW6383 General Practice Clinic (Su) (First Offered Fall 2002) Students will integrate, evaluate, and refine their legal knowledge and lawyering skills through representation of clients in civil cases pending before Arkansas Circuit and Chancery Courts, federal bankruptcy or administrative agencies pending before the U.S. Bankruptcy Court and Administrative Law Judges, and prosecution of criminal misdemeanor cases. Students are responsible for all aspects of representation including interviewing, counseling, negotiation, pleading and discovery practice, and trial advocacy. This course offers students a practice experience similar to that experienced by many practicing lawyers in small to medium sized firms in Arkansas and other states in the region. Prerequisites: Undergraduate economics course, accounting course, a course GPA of 2.00, successful completion of 48 semester hours of offerings, including LAW 4103, LAW 4203, LAW 4173, LAW 6003, and LAW 5013; and qualifying for Rule XV practice.

LAWW6393 Legal Clinic (Transactional) (IR) Students receive clinical legal experience counseling and representing non-profit organizations serving Northwest Arkansas and other areas of the state in transactional and business law matters. Services include startup, incorporation, obtaining federal and state tax exemptions, change of business form, purchase and lease of real and personal property, employment and labor law, contract negotiation, drafting and execution. In addition, students prepare and participate as presenters in a workshop on matters of general interest to non-profit organizations. Legal Clinic Faculty supervise and review the students’ work, and provide formal feedback to the individual student attorneys. Prerequisite: Qualification for Rule XV practice.

LAWW6403 Land Use (Sp, Su, Fa) Covers public land use controls such as zoning, subdivision regulations, and eminent domain (including private property rights, takings, and inverse condemnation). Heavy emphasis is placed on planning at state and local levels.

LAWW641V Higher Education and Law (Seminar, Sp, Su) (2-3) A detailed examination of legal issues arising out of structure and delivery of college and university instruction, research and service; emphasis on rights and responsibilities of students and faculty, higher education policy.

LAWW6423 Tax Policy (Sp, Su, Fa) Study of tax policy through examinations of existing federal income and transfer tax systems. Economic, political, and social consequences of existing tax laws and alternatives are considered.

LAWW6433 Legal Clinic: Innocence Project (Irregular) The clinic works in conjunction with the Innocence Project, Arkansas to provide pro bono representation to individuals committed to the Arkansas Department of Corrections where available evidence establishes proof of the client’s innocence. Students are responsible for all aspects of the representation including: case review, investigation, development of lay and expert testimony, pleading, briefing, discovery, and assistance in court proceedings. The Innocence Project, Arkansas is an Arkansas non-profit corporation. Students must be Rule XV eligible and have taken Trial Advocacy. The Innocence Project Clinic is a 3 credit course. May be taken before, after, concurrently with, or instead of Criminal Procedure, or Sentencing/Correctional Law, and satisfies the Criminal Procedure prerequisite for the civil practice or civil-defense motions, trial preparation, and trying cases to the court. The preparation and performance of student attorneys is supervised by clinic faculty who provide personal feedback to the individual students. Prerequisite: Unless waived by the instructor, a cumulative grade point average of at least 2.00; the successful completion of 48 semester hours of offerings, including Civil Procedure I, Civil Procedure II, Criminal Procedure, Evidence, and Professional Responsibility; and qualifying for Rule XV practice.

LAWW6503 Admiralty (Sp, Su, Fa) Study of admiralty and maritime law, including maritime torts and contracts, trade and labor relations, vector allocation and distribution; labor certification; and nationalization and citizenship. It is recommended that Administrative Law be taken first.

LAWW6523 Employment Law (Sp, Su, Fa) An overview of the law governing various aspects of the employer-employee relationship, both statutory and common law. Covers the establishment and parameters of employment, the security of the worker, skills and training, and legal development of English and American legal institutions and practices.

LAWW6613 Bankruptcy (Sp, Su, Fa) Study of insolvency law, with particular emphasis on federal bankruptcy law.

LAWW6623 Sentencing and Post-Conviction Remedies (Sp, Su, Fa) Law, theory, and practice of sentencing and post-conviction remedies.

LAWW6633 Bail to Jail (Irregular) Bail to Jail may be taken before, after, concurrently with, or instead of Criminal Procedure, or Sentencing/Criminal Law, and satisfies the Criminal Procedure prerequisite for the civil practice or criminal practice. The course considers the criminal process from both a theoretical and practical perspective. Principal topics covered include: decision to charge, initial appearance, bail and pretrial release, probable cause hearing, indictment and arraignment, trial preparation, and trial to the jury. The course also will cover the rights of the defendant, the rights of the state, and the role of the defense attorney. The student will be required to prepare an oral argument, research, and write a brief. The course requires effective communication skills.

LAWW6663 American Indian Law (Sp, Fa) Study of the domestic federal law of the United States as it applies to Native Americans and their tribes. The general concept of tribal self-determination is the unifying theme of the course. Principal topics include tribal sovereignty and government; American Indian civil rights; administration of justice and on and off the reservation; American Indian land laws involving fee simple, leases, life estates, and wetlands; American Indian health, education, and welfare; Bureau of Indian Affairs; state taxation; individual and tribal treaty rights; federal Indian policy; and zoning and environmental controls.

LAWW6702 Copyright and Trademark Law (Sp, Su, Fa) An examination of copyright law, trademark law, droit de suite, and related state law doctrines. Attention is also given to the technical and formal provisions of the Copyright Act.

LAWW6713 Judicial Externship (Sp, Su, Fa) Students work the equivalent of 16 hours per week during the semester under the direct supervision of a judge approved by the faculty and the externship coordinator. Students will work on assigned research, preparing memoranda, and when feasible, attending conferences with counsel conducted by the judge. Only third year students currently enrolled in this clinic.

LAWW6722 Terrorism, National Security and Human Rights (Irregular) International law issues relating to protection of human rights. Research papers will satisfy upper-level writing requirement.

LAWW6803 Comparative Law (Sp, Su, Fa) Study of legal systems and legal institutions in other countries, particularly civil law jurisdictions and socialist nations. Not offered every year.

LAWW6813 Corporate Counsel Externship (Fa) Externs work with a supervising attorney in a corporate counsel’s office. Each extern works 16 hours per week (average minimum), keeps a journal, and meets at least 3 times with the faculty supervisor. Prerequisites: LAW 4294, LAW 5013 and approval of the faculty supervisor; recommended: LAW 6293.

LAWW6822 Patent Law (Sp, Su, Fa) Study of the patent system of the United States, including conditions for a valid patent, procedures of the patent office, and litigation relating to patents. Not offered every year.

LAWW6883 Law and Education (Sp, Su, Fa) Course considers the legal and administrative responsibilities of schools and individual employment contracts through arbitration, and the use of arbitration to resolve statutory issues such as claims of employment discrimination. There will also be some consideration of other forms of alternative dispute resolution (ADR), fact-finding, and peer-review systems. Course satisfies the skills requirement.

LAWW6913 Environmental Law (Sp, Su, Fa) Devoted primarily to the legal problems related to the environment. Included is consideration of environmental impact in public and private decision making.

LAWW6923 Legal Clinic (Civil Practice) (Sp, Su, Fa) Students develop skills by representing low income clients in nearby civil courts. Students interview clients, counsel them, negotiate and litigate. The Legal Clinic faculty supervises and reviews the students’ work, and provides personal feedback to individual students. Prerequisite: Cum GPA of 2.00, successful completion of 48 semester hours, including Civil Procedure I and II, Criminal Procedure, Evidence, and Professional Responsibility, and qualifying for Rule XV practice.

LAWW6933 International Protection of Rights (Sp, Su, Fa) Principles of international law involving relations among government. The function of international tribunals and organizations.


LAWW6963 Legal Clinic (Civil Defense) (Sp, Su, Fa) Students develop skills by representing actual clients charged with misdemeanors in Washington County and nearby counties and clients charged with felonies and misdemeanors in Washington County Juvenile Court. Students interview clients, counsel them, negotiate, and litigate. The Legal Clinic faculty supervise and review the students’ work, and provide personal feedback to individual students. LAWW6962 Law and Public Policy (Sp, Su, Fa) An examination of the rights of authors, artists, songwriters, filmmakers, choreographers, performers, and others in their artistic and intellectual creations. Emphasis is placed on the general legal principles embodied in the Copyright Act, and the Lanham Act. The nature of the rights, acquisition and enforcement, and property and contract interests in copyrights.

LAWW6963 American Indian Law (Sp, Fa) Study of the domestic federal law of the United States as it applies to Native Americans and their tribes. The general concept of tribal self-determination is the unifying theme of the course. Principal topics include tribal sovereignty and government; American Indian civil rights; administration of justice and on and off the reservation; American Indian land laws involving fee simple, leases, life estates, and wetlands; American Indian health, education, and welfare; Bureau of Indian Affairs; state taxation; individual and tribal treaty rights; federal Indian policy; and zoning and environmental controls.

LAWW69702 Copyright and Trademark Law (Sp, Su, Fa) An examination of copyright law, trademark law, droit de suite, and related state law doctrines. Attention is also given to the technical and formal provisions of the Copyright Act.

LAWW69713 Judicial Externship (Sp, Fa) Students work the equivalent of 16 hours per week dur-
Course Descriptions

LAWW7012 Juvenile Justice Seminar (Sp, Su, Fa)
Examines procedural and substantive law in the context of the discipline of corrections and procedure of the Juvenile Court. Special attention is given to alternative ways of dealing with two categories of juveniles, i.e., status offenders who are within the jurisdiction of the court although not accused of criminal conduct, and youthful offenders who commit serious crimes.

LAWW7013 Juvenile Justice (Sp, Su, Fa)
LAWW7022 Health Law and Public Policy (Sp, Su, Fa)
Examines the law of public health and concerns about health. The course explores the nature of the health care system, public health issues, and the interaction of public health issues with law, politics and public policy.

LAWW7023 International Environmental Law (Sp, Su, Fa)
Study of federal and state laws governing public access, including litigation, is also considered. A research paper is required.

LAWW7031 Criminal Procedure (Sp, Su, Fa)
LAWW7032 Criminal Procedure (Sp, Su, Fa)
LAWW7033 Law and Public Policy (Sp, Su, Fa)
Study of the application of environmental law and policy to the natural law dealing with conservation of natural resources and government; American Indian civil rights; administration of the law of privacy. Specific topics vary from year to year. These include such subjects as the nature of the right caused by governmental activities and technological developments (such as computer and data bases). Comparisons with other legal systems are made. Completion of the Constitutional Law courses is highly recommended.

LAWW7053 Prosecution Externship (Irregular)
Students work in the Washington County Prosecutors office for approximately ten (10) hours each working day (3) to four (4) felony cases as well as conducting arraignments, citizen intakes, probable cause hearings, and evaluating warrants. Students also attend a weekly seminar in which they discuss various aspects of the criminal justice system. The seminar component provides time for the students to reflect on and evaluate their work. Prerequisites: LAW 6473 and Rule XV qualification.

LAWW706V Sports Law (Irregular)
The course topics covered include significant contract issues, tort liability involving participants, institutions, physicians and equipment manufacturers, alcohol and drug testing, constitutional and related issues dealing with sports associations and Title 9 and gender equity issues. Other relevant topics may also be covered if possible.

LAWW7072 Advanced Mediation Clinic (Irregular)
Students will mediate civil cases referred by Courts and agencies. Students will work with experienced mediators and the mediation clinic supervisor, who will review their performances on an individual basis. Students may produce educational programs for various groups. Class discussions will focus on current mediation issues and problems. Pre-requisite: Mediation.

LAWW7073 Mediation in Practice (Irregular)
This three-credit course will train students to mediate disputes assigned to the Northwest Arkansas Dependency-Neglect/ Families in Need of Services Mediation Project by the circuit court. In the first five weeks of the semester, students will be introduced to basic mediation theory, procedures, and ethical constraints; communication techniques; juvenile law; and operation of the child welfare system in Arkansas. This training will include lectures, discussion, and simulation exercises. In the remaining weeks of the semester, students will receive additional information and simulation practice, and they will also observe and participate in the mediation of actual cases assigned to the Project.

LAWW7083 Public Lands Law (Sp, Su, Fa) The law covering the use of federal lands and resources. Resources surveyed are lands, air, water, wildlife, recreation, and wilderness. Issues involve both private rights and public interest in common property.

LAWW7093 Banking and Financial Institutions (Sp, Su, Fa)
An examination of the law of banking and financial institutions. Topics include the regulation of traditional banking activities; deposits; lending; investments; reserve requirements; relation of trust departments; bank insolvencies; liquidations; regulation of non-traditional banking activities; bank formation and geographic expansion; the role of the Federal Deposit Insurance Corporation; international banking, regulation of investment companies, mutual funds; the corporation; and衍生品.

LAWW7102 Municipal Affairs (Sp, Su, Fa)
LAWW7112 Advanced Legal Research (Sp, Su, Fa) Elective course open to second and third year students; covers the history of legal publishing, and explores and studies the use of traditional legal research tools, new technologies and non-traditional research tools. Legal Research and Writing II is a part of the law of finance and bankruptcy.

LAWW712 Advanced Consumer Bankruptcy (Sp, Su, Fa) Study of recent developments in the law of bankruptcy law as it applies to both consumers and nonconsumers transactions. Prerequisite: LAW 6602.

LAWW7562 American Indian Law (Sp, Su, Fa) Study of the federal legal framework of the United States as reflected in Supreme Court decisions and in the special circumstances of Native Americans and their tribes. The general concept of tribal self-determination is the unifying theme of the course. Particular topics include tribal sovereignty and government; American Indian civil rights; administration of justice on and off the reservation; American Indian land claims; land, hunting, and fishing rights; water rights; American Indian health, education, and welfare; Bureau of Indian Affairs; state taxation; individual and tribal treaty rights; Supreme Court cases, federal Indian policy, and federal Indian rights.

LAWW770V Master’s Thesis in Agricultural Law (Sp, Su, Fa) (1-4) Research in a specialized area of agricultural law and development of a scholarly paper containing the results of this research.

LAWW771V Independent Research in Agricultural Law (Sp, Su, Fa) Independent research in agricultural law conducted under the supervision of a faculty member.

LAWW7722 Colloquium in Agricultural Law (Sp, Su, Fa) Presentation and discussion of papers and topics by graduate students, faculty and guest speakers with an emphasis on current issues and problems in the law of agriculture.

LAWW7723 International Agricultural Transactions (Sp, Su, Fa) Examination of agricultural trade policies, import and export laws affecting agricultural products, negotiation of international agreements, and the international aspects of financing of trade in agricultural commodities.

LAWW7732 Regulation of Agricultural Lands (Sp, Su, Fa) Selected environmental and resource use problems in the agricultural sector and the impact of environmental legislation on management and control of agricultural lands. Land use planning proposals, soil conservation laws, pesticide use controls and issues relating to the preservation of agricultural land also will be included.

LAWW7733 Government Regulation of Agriculture (Sp, Su, Fa) State and federal government regulation of agricultural products and market-setting with emphasis upon key legislative programs involving economic regulation of commodity production, pricing and marketing.

LAWW7742 Agricultural Taxation (Sp, Su, Fa) Income taxation of the farm business and a review of accounting and income taxation concepts of particular importance to the farming enterprise, including provisions relating to capital gains treatment of agricultural products, agricultural “tax shelters”, deferred payment contracts, installment sales, depreciation of farm assets, and commodities trading.

LAWW7743 Farm Estate and Business Planning (Sp, Su, Fa) Focus on general tax planning issues and special issues relating to the family farm, including coverage of relevant income, excise, and transfer taxes.

LAWW7752 Agricultural Cooperatives (Sp, Su, Fa) Examination of the law governing the organization and operation of farmer owned cooperatives, with an emphasis on New Generation value added processing cooperatives. Among the topics covered are cooperative taxation and aspects of antitrust and securities law applicable to agricultural cooperatives.

LAWW7753 Agriculture and the Environment (Sp, Su, Fa) Study of the application of environmental law to agricultural operations. Topics include soil erosion, tilling, pesticides, the Clean Water Act, the Clear Air Act, the Endangered Species Act, the National Environmental Policy Act, the Clean Water Act, and the Agricultural Water Quality Act.

LAWW7762 Agricultural Labor Law (Sp, Su, Fa) Study of the legal issues surrounding the financing of agricultural operations, including credit availability, agricultural security issues under the Uniform Commercial Code, and debt restructuring opportunities. Special focus is on lending options offered by the Farm Service Agency and the Farm Credit Administration.

LAWW7773 Water Law (Sp, Su, Fa) Study of real property principles governing ownership rights in water and the federal and state statutes controlling the use of water. Prerequisite: LAW 7762 Agricultural Labor Law (Sp, Su, Fa).

LAWW7775 Agricultural Law (Sp, Su, Fa) Study of the federal laws that govern the employment of agricultural workers, including wage and hour provisions, laws impacting migrant and seasonal farm workers, immigration issues, occupational safety and health, and child labor laws.

LAW 6473 Legal Writing II and News

LAWW7123 Advanced Legal Research (Sp, Su, Fa) Elective course open to second- and third-year students; covers the preparation of assignments and create a pathfinder to one area of interest.

LAWW7133 Regulated Industries (Sp, Su, Fa) A public-interest perspective on traditional public utilities and industries whose economics and services are heavily regulated by law. The course studies the regulation of service, deregulation, the role of competition and new technology, and reform of regulatory agencies. The course is policy-oriented and focuses on substantive issues regarding specific industries.

LAWW7203 Federal Tax Practice (Sp, Su, Fa) As the title implies, this course consists of the problems that a lawyer encounters in handling clients’ tax problems in various adversary proceedings. It deals with both representatives before administrative tribunals and before tax courts and other courts.

LAWW7212 Jurisprudence Seminar (Sp, Su, Fa) Structured discussions of the law, nature and function of the common law judicial process.

LAWW7222 Law and Environment (Sp, Su, Fa)
LAWW7232 International Environmental Law (IR) Examination of the role of the law in determining access to and regulation of the quality of services provided by the health care industry. An examination of federal and state laws governing public access to records and meetings, as well as constitutional issues pertaining to such access. The process of obtaining access, including the law of freedom of information, is also considered. A research paper is required.

LAWW7243 Health Law (Sp, Su, Fa) An examination of the law of public health and concerns about health. The course is highly interactive. In addition to lectures, students will participate in case discussions and presentations.

LAWW7252 Freedom of Information (IR) Examination of federal and state laws governing public access to records and meetings, as well as constitutional issues pertaining to such access. The process of obtaining access, including the law of freedom of information, is also considered. A research paper is required.

LAWW7302 International Business Transactions (Sp, Su, Fa) Study of the use of traditional legal research tools, new technologies and non-traditional research tools. Legal Research and Writing II is a part of the law of finance and bankruptcy.

LAWW7342 Law and the Internet (IR) This is a survey course. Students will study laws associated with doing business over the internet. A partial list of topics to be covered includes jurisdiction, trademarks, copyrights, patents, contract formation, taxation, privacy, obscenity, defamation, and criminal law. The course is highly interactive. In addition to lectures, students will participate in case discussions and presentations.

LAWW7343 Law and the Internet (IR) A survey course dealing with an array of legal issues surrounding the Internet, including contract, crime, copyright, free speech, and privacy.

LAWW7352 Privacy Law: Selected Topics (Sp, Su, Fa) Focus on areas of current concern and issues that are emerging in the law of privacy. Specific topics vary from year to year. These include such subjects as the nature of the individual’s right to privacy, protection of privacy under the constitution and by private remedy, impacts and intrusions upon the right caused by governmental activities and technological developments (such as computer and data bases). Comparisons with other legal systems are made. Completion of the Constitutional Law courses is highly recommended.

LAWW7513 Mass Communication Law Seminar (Irregular) Study of problems involving the mass media. Topics will vary but may include the constitutional protection for speech and press, defamation, invasion of privacy, access to government information, publicity and the courts, copyright, and liability for emotional and physical harm. A research paper is required.

LAWW7513 Mass Communication Law (Sp, Su, Fa) Legal problems involving the mass media including federal regulation of broadcasting; cable television; differences between commercial and public broadcasting; law on speech in such areas as defamation, privacy, election campaigns and pre-election publicity. Not offered every year.

LAWW760V Bankruptcy - Business Reorganization (Sp, Su, Fa) This course examines the rules and tactics governing the reorganization of a struggling business or farm under Chapter 11 of the Bankruptcy Code. Students will reorganize a hypothetical failing business as a part of the course.
LAW7783 Agricultural Administrative Procedure and Practice (Sp, Su, Fa) Focus on administrative law, with emphasis on the USDA and the judicial review of USDA actions involving the federal domestic commodity programs, federal crop insurance, the Packers and Stockyards Act, the Perishable Agricultural Commodity Act, and federal antitrust law.

LAW779V Agricultural Law Seminar (Sp, Su, Fa) (1-2) Intensive coverage of a specialized topic in agricultural law not covered in any existing law course. For LL.M. students only. May be repeated for 3 hours. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

LAW3053 Finite Mathematics (Fa, Sp, Su) Selected topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

LAW2103H Honors Discrete Mathematics (Fa, Sp, Su) Introductory study of sets, relations, logic, proofs, algorithms, counting methods, graph theory, trees, and Boolean algebras. Prerequisite: MATH 1203 or ACT math score of 21 or above. (Same as MATH 2103)

LAW2103 Discrete Mathematics (Sp, Su, Fa) Introductory study of sets, relations, logic, proofs, algorithms, counting methods, graph theory, trees, and Boolean algebras. Prerequisite: MATH 1203 or ACT math score of 21 or above. (Same as MATH 2103H)

LAW2183 Mathematical Reasoning in a Quantitative World (Sp, Fa) Mathematical and statistical reasoning are required in contexts of growing complexity and sophistication. The purpose of this course is to cause students to possess the power and habit of mind to search out informative information, critique it, reflect upon it in their personal, professional and public lives. Prerequisite: MATH 1203.

MATH2213 Survey of Mathematical Structures I (Sp, Su, Fa) Sets and logic; systems of numeration, number systems and operations, and elementary number theory. Prerequisite: MATH 1203.

MATH2223 Survey of Mathematical Structures II (Sp, Su, Fa) Geometry and measurement, and statistics and probability. Prerequisite: MATH 1203.

MATH2554H Honors Calculus I (Sp, Su, Fa) Topics in analytic geometry and calculus. Students may not receive credit for both MATH 2554 and MATH 2554C. Prerequisite: MATH 1203 and MATH 1213 (or MATH 1285), both with a grade of C or better, or an ACT score of 26 or greater with E/A subscore of 13 or greater and A/G subscore of 10 or greater and G/T subscore of 10 or greater. (Same as MATH 2554,MATH 2554H)

MATH2554 Calculus I (Sp, Su, Fa) Derivative of functions of one variable, applications of the derivative, introduction of the integral, and applications. Credit will be allowed for only one of MATH 2554 and MATH 2043. Prerequisite: ACT math score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 8 or greater. (Same as MATH 2043,MATH 2043C,MATH 2043I)

MATH2564H Honors Calculus II (Sp, Su, Fa) Integral calculus of one variable and infinite series. Prerequisite: MATH 2554. (Same as MATH 2564,MATH 2564H)

MATH2554 Calculus II (Sp, Su, Fa) Integral calculus of one variable and infinite series. Prerequisite: MATH 2554. (Same as MATH 2564,MATH 2564H)

MATH2574H Honors Calculus III (Sp, Su, Fa) Differential and integral calculus of several variables, and vector calculus. Prerequisite: MATH 2564. (Same as MATH 2574,MATH 2574H)

MATH2574 Calculus III (Sp, Su, Fa) Differential and integral calculus of several variables, and vector calculus. Prerequisite: MATH 2564. (Same as MATH 2574H,MATH 2574)

MATH3083 Linear Algebra (Sp, Su, Fa) Systems of linear equations, vector spaces, linear transformations, matrices and determinants. Prerequisite: MATH 2554 or MATH 2043. (Same as MATH 3083)

MATH3103 Combinatorial and Discrete Mathematics (Sp, Su, Fa) Basic combinatorial techniques including the study of networks, the principles of inclusion/ exclusion, Zn, Hamming coding theory, graph theory, and block designs. Prerequisite: MATH 2103.

MATH3113 Introduction to Abstract Algebra I (Sp, Fa) Introduction to algebraic structures with emphasis on historical development. Prerequisite: MATH 2103H.

MATH3128 Graph Theory (Sp, Su, Fa) Selected topics in algebraic structures with emphasis on algebraic structures. Prerequisite: MATH 2103H.

MATH3123 Graph Theory (Sp, Su, Fa) Selected topics in algebraic structures with emphasis on algebraic structures. Prerequisite: MATH 2103H.

MATH3121 Graph Theory (Sp, Su, Fa) Selected topics in algebraic structures with emphasis on algebraic structures. Prerequisite: MATH 2103H.

MATH3101 Graph Theory (Sp, Su, Fa) Selected topics in algebraic structures with emphasis on algebraic structures. Prerequisite: MATH 2103H.

MATH3100 Graph Theory (Sp, Su, Fa) Selected topics in algebraic structures with emphasis on algebraic structures. Prerequisite: MATH 2103H.

MATH2523H Finite Mathematics (Sp, Su, Fa) Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

MATH2503 Finite Mathematics (Sp, Su, Fa) Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

MATH2503 Finite Mathematics (Sp, Su, Fa) Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

MATH2503 Finite Mathematics (Sp, Su, Fa) Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

MATH2503 Finite Mathematics (Sp, Su, Fa) Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

MATH2503 Finite Mathematics (Sp, Su, Fa) Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)

MATH2503 Finite Mathematics (Sp, Su, Fa) Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare students to take other mathematical courses. Prerequisite: MATH 1203 with a grade of C or better or an ACT score of 23 or greater with E/A subscore of 13 or greater and A/G subscore of 6 or greater. (Same as MATH 2053C,MATH 2053I,MATH 2053H,MATH 2053)
Prerequisite: MATH 2554 and junior standing.

MATH3533 Numerical Methods (Sp, Fa) (3-4) Approximate solution of algebraic equations and differential equations. Applications of numerical methods and finite differences to differential equations. Prerequisite: MATH 2554 and proficiency in a high-level computer language.

MATH3504 Fourier Equations and Laplace Transform (Sp, Su, Fa) (3-4) First and second order ordinary differential equations, the Laplace transform, and matrix systems of ordinary differential equations. Prerequisite: MATH 2554.

MATH3423 Advanced Applied Mathematics (Sp, Su, Fa) (3-4) Matrices, Fourier analysis, and partial differential equations. Prerequisite: MATH 3404.

MATH3773 Fourier Theory of Functions of Geometry I (Fa) (3-4) Axiomatic method; Euclidean geometry; non-Euclidean geometry.

MATH3923H Honors Colloquium (Irregular) Covers a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in mathematics). May be repeated for 99 hours. MATH3993V Honors Mathematics Course (Sp, Su, Fa) (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

MATH400V Directed Readings (Sp, Su, Fa) (1-6) MATH4103 Finite Dimensional Vector Spaces (Irregular) Linear transformation, characteristic polynomial, representation of linear transformations. Prerequisite: MATH 3083.

MATH4141 Introduction to Abstract Algebra II (Fa) (3) A continuation of MATH 4140 including finite abelian groups, linear algebra, characterization of finite abelian groups, quadratic field extensions, Gaussian integers, Wedderburn's theorem. Prerequisite: MATH 3113.

MATH4153 Mathematical Modeling (Fa) (3) Mathematical techniques for formulating, analyzing, and critiquing deterministic models taken from the biological, social, and physical sciences. Techniques include graphical reasoning and computer applications. Prerequisite: MATH 3404.

MATH4203 Linear Programming and Game Theory (Irregular) Solution sets, duality, and pivoting in linear programming; extreme and primal solutions and the simplex method; the transportation problem; and matrix games. Prerequisite: MATH 3083 and proficiency in a high-level computer language.

MATH4253 Symbolic Logic I (Fa) (3) Rigorous analyses of the concepts of proof, consistency, equivalence, validity, implication, and truth. Full coverage of truth-functional logic and quantificational theory (predicate calculus). Discussion of the nature and limits of mechanical procedures (algorithms) for proving theorems in logic and mathematics. Informal accounts of the basic facts about infinite sets. (Same as PHIL 4253.)

MATH4263 Symbolic Logic II (Sp) Topics include: soundness and completeness of propositional logic, soundness and completeness of quantification theory, the elements of model theory, Gödel's incompleteness theorems, and the limitative theorems of Tarski and Church. Prerequisite: MATH 4253 or PHIL 4253. (Same as PHIL 4263.)

MATH4323 Numerical Linear Algebra (Sp) Numerical methods for problems of linear algebra, including the solution of very large systems, eigenvalues, and eigenvectors. Prerequisite: MATH 3083.

MATH4363 Numerical Analysis (Fa) General iterative techniques, error analysis, root finding, interpolation, approximation, numerical integration, and numerical solution of differential equations. Prerequisite: MATH 4313.

MATH4423 Complex Variables for Application (Sp) Complex analysis, series, and conformal mapping. Additional applications for graduate credit. Prerequisite: MATH 3404.

MATH4503 Differential Geometry and Vector Calculus (Irregular) Topics include: Vector differential and integral calculus, Stokes' Theorem in 3-space, classical differential geometry in 3-space (curves, surfaces), differential forms, general Stokes' Theorem, applications to hydrodynamics, and electromagnetism. Prerequisite: MATH 3083 and MATH 4513.

MATH4513 Advanced Calculus I (Fa) The real and complex number systems, basic set theory and topology, sequences and series, continuity, uniform convergence, and differentiation, and elementary theory. Emphasis is placed on careful mathematical reasoning. Prerequisite: MATH 2574 and MATH 3083.

MATH4523 Advanced Calculus II (Sp) The Riemann-Stieltjes integral, uniform convergence of functions, Fourier series, implicit function theorem, Jacobians, and derivatives of higher order. Prerequisite: MATH 4513.

MATH4593 Special Topics in Major Seminars (Sp, Su, Fa) (1-6) The two-credit course has several components designed to address students' mathematical knowledge, problem-solving and communication skills. A series of weekly seminars on topics of historical or cross-disciplinary interest is accompanied by a weekly problem-solving seminar in which student presentations could play a part. The course also is a forum for sharing information about career opportunities and preparation for graduate study. Prerequisite: standing in mathematics.

MATH498V Senior Thesis (Sp, Su, Fa) (1-6) MATH5013 Topics in Algebra for Teachers (Irregular) Topics from abstract and linear algebra of current interest to teachers. Prerequisite: graduate standing. May be repeated for 99 hours.

MATH5033 Topics in Analysis for Teachers (Irregular) Topics related to calculus of current interest to secondary school teachers. Prerequisite: graduate standing. May be repeated for 99 hours.

MATH504V Special Topics for Teachers (Irregular) (1-6) Current topics in mathematics of interest to secondary school teachers. Prerequisite: graduate standing. May be repeated for 99 hours.

MATH510V Mathematical Seminar (Fa) (1-3) Members of the faculty and advanced students meet for presentation and discussion of topics. Prerequisite: graduate standing.

MATH5123 Algebra I (Sp) What the beginning gradu- ate student should know about algebra: groups, rings, fields, modules, algebraic extensions, Noetherian rings, and Galois Theory. Prerequisite: MATH 3113.

MATH5133 Algebra II (Fa) Continuation of 5123. Prerequisite: MATH 5123.

MATH5303 Ordinary Differential Equations (Fa) Existence, uniqueness, stability, qualitative behavior, and numerical solutions. Prerequisite: MATH 3404 and MATH 4513 and programming experience.

MATH5313 Partial Differential Equations (Sp) Classification, boundary value problems, applications, and numerical solutions. Prerequisite: MATH 3423 and MATH 4513.

MATH5363 Scientific Computation and Numerical Methods (Fa) An introduction to numerical methods used in solving various problems in engineering and the sciences. May not earn credit for this course and MATH 4533 or MATH 4563. (Same as PHYS 5363)

MATH5453 Functional Analysis I (Odd years, Sp) Linear vector spaces and linear operators. Prerequisite: MATH 5513.

MATH5503 Theory of Functions of a Real Variable I (Fa) Real number system, Lebesque measure, Lebesque integral, convergence theorems, differentiation of monotone functions, absolute continuity, fundamental theorem of calculus L^P-spaces, Holder and Minkowski inequalities, and bounded linear functionals on the L^P-spaces. Prerequisite: MATH 4523.

MATH5513 Theory of Functions of a Real Variable II (Sp) Measure and integration on abstract measure spaces, signed measures, Hahn decomposition, Radon-Nikodym theorem, Lebesque decomposition, measures on algebras and their extensions, product measures, and Fubini's theorem. Prerequisite: MATH 5503.

MATH5523 Theory of Functions of a Complex Variable I (Fa) Complex numbers, analytic functions, power series, complex integration, Cauchy’s Theorem and integral formula, maximum principle, singularities, Laurent series, and Mbius maps. Prerequisite: MATH 4513.

MATH5533 Theory of Functions of a Complex Variable II (Sp) Topics include: functions of a complex variable, analytic continuation, harmonic functions, and entire functions. Prerequisite: MATH 5523.

MATH5703 Foundations of Topology (Fa) Metric and general topological spaces, separation axioms, Urysohn’s lemma, Tietze extension theorem, compactness, and the Tychonoff theorem. Prerequisite: MATH 4513.

MATH5713 Algebraic Topology (Fa) Homotopy, singular and relative homology, excision theorem, the Mayer-Vietoris sequence, Betti numbers, and the Euler characteristic. Prerequisite: MATH 5703.

MATH600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

MATH610V Directed Readings (Irregular) (1-6) MATH619V Topics in Algebra (Sp, Su, Fa) (1-6) Current research interests in algebra. May be repeated for 99 hours.

MATH659V Topics in Analysis (Sp, Su, Fa) (1-6) Current research interest in analysis. May be repeated for 99 hours.

MATH679V Topics in Topology (Sp, Su, Fa) (1-6) Current research interest in topology. May be repeated for 99 hours.

MATH700V Doctoral Dissertation (Sp, Su, Fa) (1-6)
MBAD5613 Financial Accounting (Fa) This course covers the preparation and use of financial statements of publicly held United States. Topics include the theory and rules used in financial statement preparation, a comparison of United States rules to International Accounting Standards, the analysis of financial statements to provide inter-company and industry comparison information about the financial statements of non-profit and governmental organizations. May be repeated.

MEEG1103 Introduction to Mechanical Engineering (Sp, Fa) Introduction of the mechanical engineering profession. Clear students using mechanical engineering projects and experiments. Corequisite: Lab and Drill components. Pre or Co-requisite: MATH 1285 or higher.

MEEG2003 Statics (Sp, Su, Fa) Equilibrium and resultant forces of systems in a plane and in space; analysis of structures, friction, centroids, moments of inertia, and virtual work method. Methods of analysis are emphasized. Corequisite: Drill component. Pre- or Co-requisite: MATH 2574. Prerequisite: PHYS 2054. (Same as MEEG 2003)

MEEG2013 Dynamics (Sp, Su, Fa) Kinematics and kinetics of particle and of rigid bodies; work and energy, impulse and momentum, and special topics. Corequisite: Drill component. Prerequisite: MATH 2574 and MEEG 2003. (Same as MEEG 2013)

MEEG2023 Introduction to Mechanics (Fa) This is a combined course covering basic parts of MEEG 2003 Statics and MEEG 2013 Dynamics. The topics include fundamentals in mechanics, forces, moments, equilibrium of particles and rigid bodies, kinematics and kinetics of particles. Mechanical Engineering students will not be given a degree credit for this class. Prerequisite: PHYS 2054 and MATH 2574.

MEEG2303 Introduction to Materials (Sp) A study of chemical, physical, and electrical properties and as using a fundamental atomic approach. The materials of interest are: metals, polymers, ceramics, and composites. The interactive relationship between structure, properties, and processing of materials will be emphasized. For various engineering applications. Corequisite: Drill component. Prerequisite: MATH 2545, PHYS 2054 and CHEM 1103.

MEEG2403 Thermodynamics (Sp, Su, Fa) A study of the 2nd law of thermodynamics, availability of energy, properties of liquids, gases, and vapors; nonflow and flow processes. Recitation 3 hours, drill 2 hours per week. Corequisite: Drill component. Prerequisite: PHYS 2054 and MATH 2564.

MEEG2703 Computer Methods in Mechanical Engineering (Sp, Su) Use of computers and programming for solving engineering problems. Basic numerical methods include curve and surface fitting, matrices, optimization, regression, integration, and differential equations. Pre- or Corequisite: MATH 3404. Corequisite: Drill component.

MEEG3013 Mechanics of Materials (Sp, Su, Fa) Stress analysis in members in tension, compression, torsion, and bending, and the design of these members. Columns, statically indeterminate beams, and simple connections. Corequisite: MATH 2003. (Same as MEEG 2013)

MEEG3113 Machine Dynamics and Control (Su, Fa) The principles of kinematics and kinetics for rigid body motion from dynamics are reviewed and applied to machine components with the goal being to determine their impact on machine behavior and performance. The time varying forces created by the movement of machine components are used to describe the machine’s vibrational motion and elementary control principles are introduced with the goal of describing how these motions might be reduced or eliminated. Corequisite: Drill component. Prerequisite: MEEG 2013 and MATH 4040.

MEEG3202 Mechanical Engineering Laboratory I (Irregular) Study of application of computer, instrumentation, data acquisition, and instrumentation with an emphasis in materials and manufacturing. Corequisite: Lab and Drill components. Prerequisite: ELEG 3903, MEEG 2303, MEEG 1103 and GNE 1122.

MEEG3212 Mechanical Engineering Laboratory II (Sp, Fa) Design and implementation of measurements, fabrication processes, data acquisition, and data analysis with emphasis in mechanical systems and mechanical systems. Corequisite: Lab component. Prerequisite: ELEG 3903, MEEG 3202, and MEEG 3103.

MEEG3303 Mechanics of Fluids (Fa, Su) A study of fluids including properties, pressure fields, and force field utilizing conservation of mass, conservation of energy, and momentum principles. Pre- or Corequisite: MEEG 3404. Prerequisite: MEEG 2403. (Same as MEEG 3503)

MEEG4003 Intermediate Dynamics (Irregular) Principles and application of dynamics from a more advanced point of view. Corequisite: MEEG 3103. Topics include use of rotating reference frames, kinematics, and kinetics of rigid bodies in 3 dimensions, and oscillations. Prerequisite: MEEG 2013.

MEEG4003 Production Engineering (Irregular) Fundamentals of the production arena; engineering statistical problem solving, basic manufacturing process and machine fundamentals, and engineering process quality control. Lecture 3 hours per week. Corequisite: MEEG 3203. (Same as MEEG 4103I)

MEEG4103H Honors Machine Element Design (Sp, Su) Select design components commonly used in modern machines, principally for energy transmission. Students will be required to design a small system and present their design to the class. Advanced project required. Prerequisite: MEEG 3013.

MEEG4103 Machine Element Design (Sp, Su) Select design components commonly used in modern machines, principally for energy transmission. Students will be required to design a small system and present their design to the class. Advanced project required. Prerequisite: MEEG 3013.

MEEG4123 Finite Element Methods I (Irregular) Introduction to the use of the finite element method in mechanical engineering analysis and design. Use of commercial software for structural problems. Pre- or Corequisite: MEEG 3013 and MEEG 4413.

MEEG4131 Creative Project Design I (Sp, Fa) Students will select a design project, and each student group will prepare a formal written proposal on their project for presentation to faculty panel. This group project will be carried to completion in MEEG 4133. Corequisite: MEEG 4132. Prerequisite: Senior Standing.

MEEG4131 Professional Engineering Practices (Sp, Fa) Design proposal preparation, design codes, professional ethics, engineering economics, and the role of the engineer in society. Corequisite: MEEG 4131. Prerequisite: Senior Standing.

MEEG4133 Creative Project Design II (Sp, Fa) Student groups will present their corrected proposal to a faculty panel and then carry out their project to completion. Each student group will make timely progress reports, verify the correctness of their completed project, and present their final report to their faculty panel. Prerequisite: MEEG 4131 and (MEEG 4103 or MEEG 4403).

MEEG4202 Mechanical Engineering Laboratory III (Sp, Fa) Application of measurement techniques to mechanical engineering problems with an emphasis in thermal systems. Corequisite: Lab component. Prerequisite: MEEG 4413.

MEEG4213 Control of Mechanical Systems (Irregular) Mathematical modeling for feedback control of dynamic mechanical systems with design techniques using Laplace transforms, state variables, root loci, frequency analysis, and criteria for performance and stability. Prerequisite: MEEG 3113. (Same as CENG 4403,ELEG 4403).

MEEG4223 System and Signal Analysis (Irregular) Discrete and continuous time dynamic systems, convolution, Fourier and z-transforms, FFT, stability, frequency response, filtering, state variable models, analysis, digital system simulation and Mason’s Rule. Credit cannot be earned for both MEEG 4233 and ELEG 3123. Prerequisite: (ELEG 2113 or ELEG 3903) and MATH 3404. (Same as ELEG 3123).

MEEG4233 Microprocessors in Mechanical Engineering I: Electromechanical Systems (Irregular) Microcomputer architecture, programming, and interfacing. Smart product design (microprocessor-based design). Control of stepper and DC motors and interlock sensors. Applications to robotics and real-time control. Mobile robot project. Digital and analog electronics are reviewed where required. Pre- or Corequisite: MEEG 4103.

MEEG4303H Honors Materials Laboratory (Irregular) A study of properties, uses, testing, and heat treatment of basic engineering materials. Corequisite: Lab component. Prerequisite: MEEG 3203 and MEEG 3013. (Same as MEEG 4303)

MEEG4303 Materials Laboratory (Irregular) A study of properties, uses, testing, and heat treatment of basic engineering materials and related analytical techniques.

Course Descriptions

MEEG4443 Thermal and Vibration Analysis and Testing of Electronics (Irregular) Packaging, manufacture, and failure mechanisms of boards and assemblies. Analysis of overtesting, thermal stress, and vibration. Laboratory testing and environmental stress screening. Corequisite: Lab component. Prerequisite: INEG 4513 or ELEG 4273.

MEEG4453 Industrial Waste and Energy Management (Irregular) Applications of thermodynamics, heat transfer, fluid mechanics, and electric machinery to the analysis of waste streams and energy consumption for industrial facilities. Current technologies and techniques for waste minimization and energy conservation including energy-consuming systems and processes, utility rate analysis, economic analysis and auditing are taught. Prerequisite: MEEG 4413.

MEEG4473 Indoor Environmental Control (Irregular) Gives student a thorough understanding of the fundamental theory of air conditioning design for commercial buildings, including calculation of cooling loads along with the proper selection and sizing of air conditioning equipment. Prerequisite: MEEG 4413.

MEEG4483H Honors Thermal Systems Analysis and Design (Fa, Su) Analysis and optimization of thermal systems and components with examples from such areas as power generation, refrigeration, and propulsion. Availability loss characteristics of energy systems and availability conservation methods. Additional topics, with an additional design project and/or more rigorous approach to design projects for honors course. Advanced project required. Prerequisite: MEEG 4413.

MEEG4483 Thermal Systems Analysis and Design (Fa, Su) Analysis and design optimization of thermal systems and components with examples from such areas as power generation, refrigeration, and propulsion. Availability loss characteristics of energy systems and availabilty conservation methods. Prerequisite: MEEG 4413.

MEEG4493 Internal Combustion Engines (Irregular) Study of the design of internal combustion engines, including emissions and performance issues. Prerequisite: MEEG 3503.

MEEG4523 Astronautics (Irregular) Study of spacecraft design and operations. Prerequisite: MEEG 2013 and MEEG 2403 or consent of instructor.

MEEG4603 Basic Nuclear Engineering (Irregular) Principles of atomic and nuclear physics, including: fusion and fission reactions, radioactive decay, and neutron interactions. Introduction to nuclear reactor theory, types, components, and behavior. Prerequisite: PHYS 2074 and MATH 2574.

MEEG4623 Radiation Protection and Shielding (Irregular) Aspects of personnel radiation protection and shielding design as applied to the operating nuclear power plant, research laboratory, or other nuclear facility. Prerequisite: PHYS 2074 and MATH 2574.

MEEG4633 Nuclear Power Generation (Irregular) Thermal energy analysis and design of nuclear power reactors and power plants including thermodynamical analysis of components and cycle, thermal and power systems, energy distribution, and fluid transients. Emphasis is on pressurized water reactors and boiling water reactors. Prerequisite: MEEG 3503 and MATH 3404 and MEEG 2403.

MEEG4703 Mathematical Methods in Engineering (Irregular) Determinants, matrices, inverse of a matrix, simultaneous equations, eigenvalues, eigenvectors, coordinate transformations for matrices, diagonalization, square roots of a matrix, cryptography, and method of least squares. Vector
Course Descriptions

Design of air pollution abatement systems and equipment
(Same as MEEG 491V) May be repeated for 6 hours.

Introduction to complex structural systems. Computational aspects of modal analysis methods are examined and applied to the study of mechanical systems in laboratory projects using a single-board feedback control system. Emphasis is placed on the FE methodology in order to make accessible the fundamentals of both analytical and experimental mechanics, heat transfer, and acoustics. Emphasis is placed on the implementation of the Navier-Stokes equations and an evaluation of the variety of conditions with examples. Begins with a derivation of the continuity equation and first and second laws of thermodynamics; material derivatives, rotation tensor, and stretch tensor. Balance laws, field equations, constitutive equations, and fundamental treatment of electronic packaging from single chip to multichip including materials, electrical design, thermal design, packaging, and micro assembly. The course will also introduce to micro scales, fundamentals of micro fabrication, surface and bulk micromachining, device packaging, device reliability, examples of micro sensors and actuators. Recitation/lecture/three lab. Prerequisites: MEEG 2413 or CHEG 2133. (Same as ELEG 2573 and ELEG 3503.)

Introduction of software tools and techniques used for design of mechanical systems. Introduction to the principles of fluid mechanics and gas dynamics applied to compressible flows such as two dimensional isentropic flow in variable area ducts, normal shock waves, flow in ducts with friction, heat transfer, and cooling of shock and expansion waves and shock tube flow pipe. Prerequisite: MEEG 3503 and MATH 2547.

MEEG5643 Advanced Numerical Methods (Sp)
Numerical methods for the solution of linear and non-linear ordinary and partial differential equations; initial and boundary value problems; one-step and multi-step methods; pre- dominantly finite difference but also finite element and control volume techniques; and computer applications. Graduate standing in Engineering or consent of instructor.

MEEG590V Research (Sp, Su, Fa) (1-6)
Fundamental or applied research. Prerequisite: graduate standing.

MEEG591V Special Problems (Sp, Su, Fa) (1-6)
Prerequisite: graduate standing. May be repeated for 6 hours.

MEEG600V Master's Thesis (Sp, Su, Fa) (1-6)
Prerequisite: graduate standing.

MEEG6253 Advanced Micro Electro Mechanical Systems (Sp)
An advanced study of microscale mechanical devices and electrical design, thermal design, mechanical design, packaging and simulation, computer-aided engineering and design, and microsystems technology. Prerequisites: MEEG 2413 or CHEG 2133. (Same as ELEG 6273)
related nano manufacturing processes. Students will achieve an integrated knowledge of the concepts of surface science, quantum mechanics, novel processing and manipulation, and techniques of materials research. Prerequisite: MPEH 5713.

MPEH5811 Operations Seminar (Sp, Su, Fa) Weekly seminar of Microelectronics-Photonics candidates for the Ph.D. degree to discuss issues that impact a technical group's operational effectiveness. Topics to be discussed include ethics, applications of procedure, cultural impact on operations, and team based methodologies. Discussions of current events in the interaction between technology and human affairs will be included as appropriate. Prerequisite: graduate standing.

MPEH5821 Ethics for Scientists and Engineers (Su) This course examines the methods useful in the practices of ethical decision making in the high technology academic and industrial work place. An emphasis will be placed on applying the methods discussed in the text to student and instructor past professional experiences. Prerequisite: graduate standing.

MPEH5831 Proposal Writing and Management (Su) Advanced scientific and engineering research and development typically requires significant resources to be successful. This course introduces the student to the factors that impact proposal success in both the academic and industrial arenas; it demonstrates different approaches to writing proposals, recent modifications of successful proposals; and it introduces the student to the legal responsibilities and ramifications of proposal management. At the end of the class, each student will have ready for submission at least one complete and competitive funding agency proposal for their research group. Prerequisite: graduate standing.

MPEH587V Special Topics in Microelectronics-Photonics (Irregular) (1-3) Consideration of current microelectronics-photonics topics not covered in other courses. May be repeated for 9 hours. Prerequisites MPEH 5880.

MPEH5880 Special Problems in Microelectronics-Photonics (Irregular) (1-3) Opportunity for individual study of advanced subjects related to a graduate degree in Microelectronics-Photonics to suit individual requirements. May be repeated for 6 hours. Prerequisite: graduate standing.

MPEH611 Operations Seminar (Sp, Su, Fa) Weekly seminar of Microelectronics-Photonics candidates for Doctor of Philosophy degrees to discuss issues that impact a technical group's operational effectiveness. Topics to be discussed include ethics, applications of procedures, cultural impact on operations, and team based methodologies. Discussions of current events in the interaction between technology and human affairs will be included as appropriate. Prerequisite: graduate standing.

MEST2035 Islam in History, Practice and Experience (Sp, Su, Fa) This course introduces Islam as a global religion and world civilization, including study of the Qur'an, prophet Muhammad, ritual and community practices, masjids, mysticism, art, literature, and sacred and critical history. MEST2013 Gateways to the Middle East (Sp, Su, Fa) This course is designed to provide students with fundamental building blocks for understanding the contemporary Middle East-Islamic World. Students will be introduced to a variety of disciplinary approaches to the study of the geo-cultural region, including history, politics, arts and literature, religions and cultures, social geography, and economics. MEST400H3 Honors Middle East Studies Honors Colloquium (Sp, Su, Fa) (Same as MEST 4003) May be repeated for 3 hours. MEST4013 Middle East Studies Colloquium (Sp, Su, Fa) An interdepartmental colloquium with an annual change in subject required of all students in the Middle East studies program. Prerequisite: sophomore standing. (Same as MEST 4003H) May be repeated for 6 hours.

Management (MGMT)

MGMT3933 Entrepreneurship and New Venture Development (Fa) The role of the entrepreneur in starting up new businesses. Identification of new venture opportunities and the evaluation of their feasibility. Prerequisite: WCOB 2033.

MGMT400H3 Management Honors Colloquium (Irregular) Explores events, concepts and/or new developments in the field of Management. Prerequisite: Senior standing. May be repeated for 9 hours.

MGMT4103 Special Topics in Management (Irregular) Explores trends, concepts, and important developments in management as they impact on organizational processes and the management of the department. Prerequisite: Department faculty for each semester the course is offered. May be repeated for 9 hours.

MGMT4243 Ethics and Corporate Responsibility (Sp, Fa) A comprehensive and critical examination of traditional and current ethical theories and approaches that guide business decision-making, ethical issues that affect business decisions, and the impact on various business disciplinary principles. Prerequisite: WCOB 2033.

MGMT4253 Leadership (Sp, Fa) This course offers a foundation for understanding and evaluating organizational leadership. It is designed to assist students in developing frameworks for understanding and enacting leadership. This course examines topics such as the nature and foundation of the leader-follower relationship, models that explain effective leadership, and the interface of leadership with gender, ethics, and culture. Prerequisite: WCOB 2033.

MGMT4263 Organizational Change and Development (Sp, Fa) This course will develop diagnostic and intervention skills to identify changing conditions and overcoming problems of morale and productivity in organizations. A variety of behavioral methods will be covered. Prerequisite: WCOB 2033.

MGMT4433 Small Enterprise Management (Sp) Small enterprise opportunities and problems emphasizing innovation, management planning and control, financing, marketing and legal requirements. Emphasis on application of management principles to small enterprise management. Prerequisite: MGMT 3933.

MGMT450V Independent Study (Sp, Su, Fa) (1-3) Special topics in management. May be repeated for 6 hours. Prerequisite: MGMT 450V.

MGMT4543 Proposal Writing and Management (Irregular) (1-3) Development of internal and external business administration and management skills for the development of business proposals and projects. Emphasis on planning, researching, developing a proposal, and preparing a technical report. Prerequisite: WCOB 2033.

MGMT4943 Organizational Staffing (Sp, Fa) In-depth study of theoretical, legal, methodological, and substantive issues related to selection, performance appraisal, and development of employees. Students participate in individual and group projects designed to provide theoretical and practical skills related to staffing. Prerequisite: WCOB 2033.

MGMT4953 Organizational Rewards and Compensation (Sp, Fa) Develops an understanding of internal and external reward systems and their relationships to the design of compensation systems. Presents theoretical and legal background and practical applications for the use of reward systems in attracting, motivating, and retaining employees. Prerequisite: WCOB 2033.

MGMT4993 Entrepreneurship Practicum (Sp, Su, Fa) Hands-on management of an actual on-going business. Students will gain experience working in, making decisions about, and managing a business. Topics covered include accounting, economics, finance, information systems, law, logistics, management, and marketing. Prerequisite: WCOB 2033.

MGMT5203 Managerial Process and Organizational Behavior (Sp, Fa) An in-depth study of theory, research, and practice in the area of organizational behavior. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: WCOB 2033.

MGMT5213 Seminar in Research Methods (Irregular) Provides an overview of major conceptual and methodological issues in research. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: WCOB 2033.

MGMT5223 Managing & Leading Organizations (Fa) Focus is on creative decision making, managing for innovation, strategic analysis of innovations, and implementation of innovations. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: WCOB 2033.

MGMT5233 Seminar in Human Resource Management (Irregular) Provides an overview of major conceptual and methodological issues in research. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: WCOB 2033.

MGMT5313 Strategic Management (Sp) Focus is on creative decision making, managing for innovation, strategic analysis of innovations, and implementation of innovations. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: WCOB 2033.

MGMT5323 New Venture Development (Fa) Focus is on the identification and analysis of new venture opportunities and the development of necessary human and financial resources needed to develop successful businesses. Topics include market analysis, development of products and services, negotiation, developing and executing business plans, and evaluation of business combinations. Prerequisite: WCOB 2033.

MGMT5343 Managerial Communication (Sp, Su, Fa) Communication concepts and theories with emphasis on written and oral skill building. Students apply concepts and skills in a variety of communication settings. Prerequisite: WCOB 2033.

MGMT5353 Multinational Management (Fa) Problems involved in multinational management of business firms; emphasis placed on environmental and organizational variables and the application of management concepts as they apply to international situations. Prerequisite: WCOB 2033.

MGMT5363 Innovation & Creativity (Sp) This class will provide a framework for developing, assessing and implementing innovations in start-ups and established businesses. Focus is on creative decision making, managing for innovation, strategic analysis of innovations, and implementation of innovations. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: WCOB 2033.

MGMT5383 Intern/Entrepreneurship of Technology (Sp, Su, Fa) A multidisciplinary survey of the develop -ment of new technologies and their use in start-ups and in existing companies. The course includes examination of the search and evaluation for new technology; development of business plans, resources, and prototypes; and managing the launch and business development of new products. Prerequisite: WCOB 2033.

MGMT5453 International Management (Sp) Explores trends, concepts, and important developments in management as they impact on organizational processes and the management of the department. Prerequisite: Department faculty for each semester the course is offered. May be repeated for 9 hours.

MGMT5613 Seminar in Strategy Research (Irregular) This Ph.D.-level seminar presents an overview and introduction into organizational theory literature. Emphasis on the development of relevant schools of thought, changes in the content of the traditional or 'mainstream' theories, current topics, schools of thought, and future directions are examined. Prerequisite: admission to Ph.D. program.

MGMT5613 Seminar in Strategy Research (Irregular) This Ph.D.-level seminar presents an overview and introduction into the strategic management literature. Emphasis on both the content and methodology in current research. Relevant theory, methods, 'mainstream' themes, current topics, schools of thought, and future directions are examined. Prerequisite: admission to Ph.D. program.

MGMT6203 Seminar in Organization Theory (Irregular) This Ph.D.-level seminar presents an overview and introduction into organizational theory literature. Emphasis on the development of relevant schools of thought, changes in the content of the traditional or ‘mainstream’ theories, current topics, schools of thought, and future directions are examined. Prerequisite: admission to Ph.D. program.

MGMT6213 Seminar in Research Methods (Irregular) Explores trends, concepts, and important developments in management as they impact on organizational processes and the management of the department. Prerequisite: Department faculty for each semester the course is offered. May be repeated for 9 hours.

MGMT6223 Seminar in Management Topics (Irregular) Seminar in special research topics in management. Topics vary depending upon instructor. Prerequisite: admission to a Ph.D. program. May be repeated for 3 hours.

MGMT6233 Seminar in Human Resource Management (Irregular) Provides an overview of major conceptual and methodological issues in research. Emphasis on the impact of the cultural and structural characteristics of organizations on behavior. Prerequisite: admission to a Ph.D. program. May be repeated for 3 hours.

MGMT636V Special Problems in Management (Sp, Fa) (1-6) Individual reading and research. May be repeated for 6 hours. Prerequisites: WCOB 2033.

MGMT7700V Doctoral Dissertation (Sp, Fa) (1-18)
Prerequisite: candidacy.

Army ROTC (MILS)

MILS1001 Basic Outdoor Skills and Leadership Introduction (Fa) Incorporates various outdoor field craft and survival skills with dayroom and outdoor instruction. Subjects include small group leadership, rappelling, basic map reading, water safety and first aid. Introduction to safe use of a rifle and basic marksmanship. Introduction to organization, values, and mission of the Army. Classroom 1 hour per week. Lab 1 hour per week.

MILS1011 Rappelling, Outdoor Field Craft and Leadership Development (Sp) Incorporates various outdoor field craft and survival skills. Subjects include basic rappelling, mountaineering, intermediate map reading/orientation, first aid and outdoor cold/heat/water survival skills. Individual work and small group leadership principles. Classroom 1 hour per week. Lab 1 hour per week.

MILS1101 Basic Marksmanship (Fa) Introduction to safe use of a rifle and practical application of rifle marksmanship. Course includes weapons safety, mechanics, capabilities, and fundamentals of marksmanship. Includes visit to fire at a local indoor rifle range. Materials and equipment furnished by Department of Military Science.

MILS1211 Basic Outdoor Field Craft and Skills (Sp, Fa) Introduction to basic military survival skills and outdoor field craft. Subjects include cold/hot weather survival, water safety, first aid. Rappelling, signaling, and rappelling/mountaineering. Materials and equipment furnished by Department of Military Science.

MILS2002 Leadership Development I (Fa) Continuation of basic skills presented in MILS 1001 and MILS 1011. MILS 1001. Course focus is on small unit leadership, team building and management skills. Includes an introduction to small unit tactics. Students develop leadership potential by leading discussions, developing and briefing operation plans using the military decision making model. Classroom 2 hours per week. Lab 1 hour per week. Corequisite: lab component. Prerequisite: MILS 1001 or MILS 1011 or approval of Professor of Military Science.

MILS2012 Leadership Development II (Sp) Continuation of leadership skills presented in MILS 2002. Course focus is on decision making process, time management, and leadership skills. Includes an introduction to military writing and basic tactics. Cadets continue training in land navigation, first aid, and outdoor field craft. Classroom 2 hours per week. Lab 1 hour per week. Corequisite: lab component. Prerequisite: MILS 1001 and MILS 1011 or approval of Professor of Military Science.

MILS2101 Advanced Rifle Marksmanship (Sp) Course is an introduction and fundamentals of Advanced Rifle Marksmanship. Class is conducted once a week with topics including: Air rifle, small bore firing, advanced practical exercises of different shooting positions and marksmanship conducted with small arms. Prerequisite: MILS 1101.

MILS3004 Applied Leadership I (Fa) Development of managerial and leadership abilities, maximizing performance-oriented 'hands-on' training. Students learn advanced infantry tactics and demonstrate their leadership potential using this medium. Students are required to lead in drill and ceremony, physical training, and tactical infantry situations. The training is intended to prepare the student for the ROTC Advanced Camp experience normally in the summer prior to the senior year or 4th year of ROTC. Lecture 3 hours, laboratory 3 hours per week, plus 3 hours of physical training are conducted weekly. One weekend field training exercise is required per semester. Corequisite: Lab component. Prerequisite: junior standing plus one of the following conditions: completion of ROTC basic camp, veteran status, or completion of basic training with any component of the U.S. Armed Forces.

MILS3014 Applied Leadership II (Sp) Development of managerial and leadership abilities, maximizing performance-oriented 'hands-on' training. Students learn advanced infantry tactics and demonstrate their leadership potential using this medium. Students are required to lead in drill and ceremony, physical training, and tactical infantry situations. The training is intended to prepare the student for the ROTC Advanced Camp experience normally in the summer prior to the senior year or 4th year of ROTC. Lecture 3 hours, laboratory 3 hours per week, plus 3 hours of physical training are conducted weekly. One weekend field training exercise is required per semester. Corequisite: Lab component. Prerequisite: junior standing plus one of the following conditions: completion of ROTC basic camp, veteran status, or completion of basic training with any component of the U.S. Armed Forces.

MILS4001 Contemporary Military Issues (Sp, Fa) Individual study for advanced undergraduates. Students will research, write a paper, and give an oral presentation of a current military issue. Prerequisite: PMS approval.

MILS4004 Advanced Leadership I (Fa) The study of various military organizations and their role in military operations. Discussion of command and staff management in military organizations, executive responsibility of Army commissioned officer, service customs, courtesies, and traditions. The senior year includes study of personnel management, professional ethics, the military justice system, and the Army’s training and maintenance management system. Lecture 3 hours, laboratory 3 hours, physical training 3 hours per week. MS IV cadets plan and participate in 1st field training exercise per semester. Corequisite: Lab component. Prerequisite: successful completion of MS III course work.

MILS4011 Advanced Military Correspondence (Sp, Fa) Practice for advanced undergraduates. Students submit prepared military correspondence projects written in the military style using military forms and formats. Prerequisite: MILS approval.

MILS4014 Advanced Leadership II (Sp) The study of various military organizations and their role in military operations. Discussion of command and staff management in military organizations, executive responsibility of Army commissioned officer, service customs, courtesies, and traditions. The senior year includes study of personnel management, professional ethics, the military justice system, and the Army’s training and maintenance management system. Lecture 3 hours, laboratory 3 hours, physical training 3 hours per week. MS IV cadets plan and participate in 1st field training exercise per semester. Corequisite: Lab component. Prerequisite: successful completion of MS III course work.

Marketing (MKTG)

MKTG433 Principles of Marketing (Fa) Distribution of manufactured goods, agricultural and natural products from producer to consumer; channels of trade, marketing functions, institutions, costs, problems, and policies. Prerequisite: ECON 2013 and ECON 2020 or ECON 2143.

MKTG4333 Promotional Strategy (Sp, Fa) Provides the student with the theory, knowledge, and application relevant to promotional strategy formation. Focus is on the comprehensive understanding of promotional strategies and their varying roles in different industries. Prerequisite: MILS approval.

MKTG4003H Advanced Leadership I (Fa) The study of various military organizations and their role in military operations. Discussion of command and staff management in military organizations, executive responsibility of Army commissioned officer, service customs, courtesies, and traditions. The senior year includes study of personnel management, professional ethics, the military justice system, and the Army’s training and maintenance management system. Lecture 3 hours, laboratory 3 hours, physical training 3 hours per week. MS IV cadets plan and participate in 1st field training exercise per semester. Corequisite: Lab component. Prerequisite: successful completion of MS III course work.

MKTG5433 Principles of Marketing (Fa) Distribution of manufactured goods, agricultural and natural products from producer to consumer; channels of trade, marketing functions, institutions, costs, problems, and policies. Prerequisite: ECON 2013 and ECON 2020 or ECON 2143.

MKTG4001H Marketing and Transportation Honors Colloquium (Irregular) Explores events, concepts and/or new developments in the field of Marketing and/or Transportation Honors Standing. Prerequisite: MILS 1101.

MKTG4033 Selling and Sales Management (Sp, Fa) Direction, supervision, control of sales divisions of manufacturing and wholesale organizations; sales planning, research, supervision, motivation and compensation of salespersons; principles and techniques of personal selling. Prerequisite: MKTG 3433.

MKTG4103 Marketing Topics (Irregular) Special topics in marketing not available in other courses. Topics are selected by the Marketing faculty for each semester each course is offered. Prerequisite: MKTG 3433. May be repeated for 6 hours.

MKTG4133 Marketing Research (Sp) Modern research techniques applied to problems of measuring market and sales potentials, allocation of territories, demand for industrial goods, consumer purchasing power, sales forecasts; uses research as basis for establishing marketing strategy. Prerequisite: MKTG 3433 and WOCS 1033.

MKTG4533 Marketing Management (Sp) Strategic planning and management of the marketing function. Topics covered include product planning, channels strategy, pricing strategy, and promotional strategy in the context of the overall strategic direction of the firm. Prerequisite: MKTG 4133 and MKTG 4503.

MKTG4553 Consumer Behavior (Fa) Analyzes consumer motivation, buying behavior, market adjustment, product innovation and adaptation; consumer market mea-
designed to familiarize the student with the history, physics, basic playing skills, methods, materials, and teaching techniques of the instrument.

MUAC1371 Teaching the Beginning Percussionist (Sp, Fa) A study of the pedagogy and techniques needed to instruct middle school and junior high percussionists. Emphasis on the snare, drum and marimba performance. Study of junior high band and orchestra methods, soloists and ensemble music.

MUAC1381 Class Instruction in Voice (Sp, Fa) Fundamentals of vocalization and singing of English songs, including breathing, vowel clarity, and pronunciation of consonants.

MUAC2111 Music Technology I (Sp, Su, Fa) Students will develop skills in transferring music using music notation software and learn about sound reinforcement systems. Prerequisite: MUAC 1231.

MUAC2121 Music Technology II (Sp, Su, Fa) Students will learn how to use MIDI sequencing and audio recording and editing software to produce accompaniment tracks and create compact discs of music and multimedia projects. Prerequisite: MUAC 1231.

MUAC2141 Class Instruction in Oboe, Bassoon, and Saxophone (Sp, Fa) The elementary study of the oboe, bassoon, and saxophone. Class instruction designed to familiarize the student with basic playing skills and teaching techniques of the instruments. Prerequisite: MUAC 1311 or MUAC 1341.

MUAC2221 Piano Class for Music Majors III (Fa) A continuation of MUAC 1231. Two meetings per week. Prerequisite: MUAC 1231.

MUAC2231 Piano Class for Music Majors IV (Sp, Fa) A continuation of MUAC 2221. Two meetings per week. Prerequisite: MUAC 2231.

MUAC4371 Teaching the High School Percussionist (Odd years, Sp) A study of solo literature and small and large ensemble literature appropriate for the high school percussionist. Emphasis on advanced snare drum and marimba II, timpani and the broad range of percussion instruments. Includes study of high school band, orchestra and percussion ensemble scores. Prerequisite: MUAC 1371.

Applied Music Private Inst (MUAP)

MUAP1001 Applied Voice/Instrument-Secondary Level (Sp, Su, Fa) Private study at the secondary level. May be repeated for 99 hours.

MUAP110V Applied Voice/Instrument (Sp, Su, Fa) (1-4) Private study of the major instrument. May be repeated for 99 hours.

MUAP3001 Applied Voice/Instrument-Level (Sp, Su, Fa) Private study at the secondary level. Prerequisite: MUAP 1001. May be repeated for 99 hours.

MUAP310V Honors Applied Voice/Instruction (Sp, Su, Fa) (1-4) Private study of the major instrument. Prerequisite: MUAP 110V. For the same as MUAP 310V may be repeated for 99 hours.

MUAP3201 Honors Applied Recital I (Sp, Su, Fa) Preparation and performance of a public recital of a minimum of 50 minutes of music. Corequisites: MUAP 310 H. (Same as MUAP 3201) May be repeated for 99 hours.

MUAP3201 Recital I (Sp, Su, Fa) Preparation and performance of a public recital of a minimum of 50 minutes of music. Prerequisite: MUAP 3201. (Same as MUAP 4201h) May be repeated for 99 hours.

MUAP4201 Recital II (Sp, Su, Fa) Preparation and performance of a public recital of a minimum of 50 minutes of music. Prerequisite: MUAP 3201.

MUAP4301 Composition Recital (Sp, Su, Fa) Preparation and performance of a public recital of a minimum of 50 minutes consisting of original musical compositions. May be repeated.

MUAP5001 Applied Voice/Instruction-Secondary Level (Sp, Su, Fa) (1-4) Private study at the graduate secondary level. May be repeated for 99 hours.

MUAP510V Applied Voice/Instruction (Sp, Su, Fa) (1-5) Private study at the graduate level. Prerequisite: MUAP 310 or equivalent. May be repeated for 99 hours.

MUAP5201 Graduate Recital I (Sp, Su, Fa) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated for 99 hours.

MUAP5211 Graduate Recital II (Sp, Su, Fa) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated for 99 hours.

Music Education (MUED)

MUE2012 Introduction to Music Education (Sp, Fa) A course designed to provide early experiences for the prospective music teacher. Students will become familiar with professional trends, music classroom organizational and management issues, and principles of effective communication. Emphasis will include basic psychological and philosophical orientation, as well as observations in public school classrooms. Required of all prospective Music Education majors.

MUE3021 Supervised Practicum in Teaching Musical Skills (Sp, Su, Fa) Provides for supervised teaching opportunities with public school students in instrumental, choral, and elementary classes. Prerequisite: instrumental emphasis (band): MUAC 1221 & MUAC 1231, MUAC 1311, MUAC 1341, MUAC 1351, MUAC 1361 & MUAC 1371. Prerequisite for instrumental emphasis (string): MUAC 1221 & MUAC 1231, MUAC 1301, MUAC 1311. Prerequisites for vocal (elementary) emphasis: MUAC 1221 & MUAC 1311 and any four of those listed for “band” concentration. Prerequisites for vocal (elementary) emphasis: MUAC 1221 & MUAC 1311 and any four of those listed for “band” or “string” concentration. MUAC 1311 may also count toward the Music major.

MUE3813 Music for Elementary Education Majors (Sp, Su, Fa) Develops music knowledge, skills, and pedagogical techniques for use in the elementary classroom. Lecture 3 hours, laboratory 1 hour per week. Prerequisite: MUAC 1161.

MUE3833 Music Education in the Elementary School (Sp, Su, Fa) Concepts of elementary music education methods, materials, curriculum design, and supervision in elementary school music.

MUE4031 Seminar for Professional Entry into Music Education (Sp, Fa) A seminar offered during the student teaching semester to prepare the student for the role of a professional educator. Content includes professional ethics and conduct, classroom management, evaluation and grading, and application for employment.

MUE4112 Pedagogy in Music Education (FA) A course presenting broad music teaching concepts and specific teaching behaviors. Students will experience the pedagogical teaching situation through the construction of effective communication practice. Emphasis will be on providing a laboratory environment representative of public school classrooms. Required of all Music Education majors. Prerequisites: MUE 2012, MUE 3021, MUE 3833. May be repeated. A minimum of five weeks and a maximum of ten weeks will be spent in an off-campus school, where the student will teach under supervision in the elementary classroom and will participate in other activities involving the school and community. Enrollment requirement is for a total of 12 hours and 15 weeks involvement in 425V and 451V. Corequisite: MUE 452. Prerequisite: Bachelor of Music degree in Music Education.

MUE451V Student Teaching: Elementary Music (Sp, Su, Fa) (4-8) A minimum of five weeks and a maximum of ten weeks will be spent in an off-campus school, where the student will teach under supervision in the elementary classroom and will participate in other activities involving the school and community. Enrollment requirement is for a total of 12 hours and 15 weeks involvement in 425V and 451V. Corequisite: MUE 451. Prerequisite: Bachelor of Music degree in Music Education.

MUE477V Special Topics in Music Education (Irregular) (1-4) Subject matter courses. With permission, may be repeated for credit if topics are different. May be repeated for 99 hours.

MUE5513 Seminar: Resources in Music
Education (Sp, Su, Fa) Study of the analytical and writing skills necessary for academic research in music education. Prerequisite: one problem solution in music education. MUED5653 Seminar: Issues in Music Education (Sp, Su, Fa) A seminar exploring the relationships between the profession of teaching music and selected views about learning theories, teaching methods, philosophy, psychology, and other related topics relevant to contemporary music education.

MUED5733 Music Education in the Elementary School (Sp, Su, Fa) An introduction to the field of elementary music education; methods, materials, curriculum design, and supervision in elementary school music.

MUED5811 Curriculum Design in Music (Sp, Su, Fa) Goals and objectives in music education. Student will develop a curriculum for an actual or hypothetical music education program.


MUED5862 Marching Band Techniques (Su) Includes the place of the marching band in the school program, procedures of band usage, and selecting, arranging or writing the musical score. MUED588V The Choral Program: Changing Materials and Techniques (Sp, Su, Fa) (1-3) Treatment of instrumentation and issues survey of choral literature; materials and contemporary methods appropriate to the development of a comprehensive choral experience. MUED5973 Tests and Measurement in Music (Fa) This course will emphasize the conceptual basis for tests and measurement of music achievement, aptitude, attitude, and self-assessment. This course will focus on the teaching and assessment of musical skills, musical responses, and written tests in choral music. MUED599V Seminar (Su) (1-6) An in-service training workshop for music education. MUED600V Master’s Thesis (Irregular) (1-6) Preparation of a master’s thesis as partial fulfillment of the requirement for the master’s degree. MUED605V Independent Study (Sp, Su, Fa) (1-6) Provides students with an opportunity to pursue special study of problems in music education.

Music Ensemble (MUEU)

MUEU1531 Brass Ensemble (Sp, Fa) Study and performance of chamber music for brass instruments. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3341 Collegium Musicum (Sp, Fa) Performance of early music various combinations of instruments and/or voices. Two hours rehearsal weekly. May be repeated for 99 hours. MUEU3401 Opera Theatre (Sp, Fa) Study of opera through performances of scenes, chamber and major operatic production. Admission with director’s approval. May be repeated for 99 hours. MUEU3411 Concert Choir (Sp, Su, Fa) Three hours of rehearsal weekly, with extra rehearsals at the director’s discretion. Admission with director’s approval. May be repeated for 99 hours. MUEU3421 Inspirational Singers (Sp, Fa) Performance of African-American literature with particular emphasis on Negro Spirituals and traditional/contemporary gospel music. No audition required for registration. Rehearsal 3 hours per week. May be repeated for 99 hours. MUEU3431 Symphony Orchestra (Sp, Su, Fa) Rehearsal 3 hours per week with extra rehearsals at director’s discretion. Admission with director’s approval. May be repeated for 99 hours. MUEU3441 Accompanying Band (Fa) Rehearsal 8 hours per week. Admission with director’s approval. May be repeated for 99 hours. MUEU3451 Schola Cantorum (Sp, Fa) Vocal ensemble limited to the more experienced singers. Rehearsal 5 hours per week. Admission with director’s approval. Prerequisite: MUEU 3411. May be repeated for 99 hours. MUEU3461 Wind Symphony (Fa) Rehearsal 3 to 5 hours per week. Admission by audition and approval of the conductor. Corequisite: MUEU 3460L. May be repeated for 99 hours. MUEU3471 Jazz Performance Laboratory (Sp, Fa) Rehearsal 2 hours per week. Admission by audition and approval of the conductor. May be repeated for 99 hours. MUEU3481 Concert Band (Sp) Rehearsal 3 hours per week. Admission by audition and approval of the conductor. May be repeated for 99 hours. MUEU3501 Chamber Music (Sp, Su, Fa) Performance of small ensemble music for any combination of instruments and/or voice. Rehearsal 3 hours per week. May be repeated for 99 hours. MUEU3511 Symphonic Band (Sp) Rehearsal 2 hours per week. Admission by audition and approval of the conductor. May be repeated for 99 hours. MUEU3521 Woodwind Quintet (Sp, Fa) Study and performance of music for woodwind quintet. Weekly coaching will emphasize intonation, blend, stylistic awareness, and ensemble precision. Repertoire ranges from the Baroque to the 20th centuries. 3 hours of rehearsals weekly. May be repeated for 99 hours. MUEU3531 Brass Ensemble (Sp, Fa) Study and performance of chamber music for brass instruments. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3541 Accompanying Band (Sp) Piano accompanying of vocal and instrumental soloists. Rehearsal 2 hours per week. Prerequisite: MUPA 110. May be repeated for 99 hours. MUEU3551 Percussion Ensemble (Sp, Su) Study and performance of ensemble music for multiple percussion instruments. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3558 Vocal Ensemble (Sp, Su, Fa) Study and performance of vocal chamber music. Rehearsal 2 hours per week for 1 hour of credit. May be repeated for 99 hours. MUEU3591 Chamber Orchestra (Sp, Su, Fa) Performance of orchestral music for a small group of instruments as opposed to large symphonic works. Rehearsal 3 hours per week. Prerequisite: concurrent enrollment in MUEU 3431 and MUEU 5431. May be repeated for 99 hours. MUEU3711 Flute Ensemble (Sp, Fa) Study and performance of music for multiple flutes, including trios, quartets, quintets, and flute choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3721 Clarinet Ensemble (Sp, Fa) Study and performance of music for multiple clarinets, including trios, quartets, quintets, and clarinet choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3731 Saxophone Ensemble (Sp, Fa) Study and performance of music for multiple saxophones, including trios, quartets, quintets, and saxophone choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3741 Double Reed Ensemble (Sp, Fa) Study and performance of music for multiple double reed instruments, including trios, quartets, quintets, and double reed choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3751 Trumpet Ensemble (Sp, Fa) Study and performance of music for multiple trumpets, including trios, quartets, quintets, and trumpet choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3771 Trombone Ensemble (Sp, Fa) Study and performance of music for multiple trombones, including trios, quartets, quintets, and trombone choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3781 Tubaphone Ensemble (Sp, Fa) Study and performance of music for multiple combinations of tuba and euphonium, including trios, quartets, quintets, and low brass choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3791 University Bassoon Ensemble (Sp, Fa) Study and performance of music for multiple bassoons and contrabassoon, including trios, quartets, quintets, and bassoon choir. One hour of rehearsal weekly. May be repeated for 99 hours. MUEU3731 Saxophone Ensemble (Sp, Fa) Study and performance of music for multiple saxophones, including trios, quartets, quintets, and saxophone choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3741 Double Reed Ensemble (Sp, Fa) Study and performance of music for multiple double reed instruments, including trios, quartets, and double reed choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3751 Trumpet Ensemble (Sp, Fa) Study and performance of music for multiple trumpets, including trios, quartets, and quintets. Rehearsal 3 hours per week. May be repeated for 99 hours. MUEU3761 Flute Ensemble (Sp, Fa) Study and performance of music for multiple flutes, including trios, quartets, quintets, and flute choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3771 Clarinet Ensemble (Sp, Fa) Study and performance of music for multiple clarinets, including trios, quartets, quintets, and clarinet choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3781 Tubaphone Ensemble (Sp, Fa) Study and performance of music for multiple combinations of tuba and euphonium, including trios, quartets, quintets, and low brass choir. Rehearsal 2 hours per week. May be repeated for 99 hours. MUEU3791 University Bassoon Ensemble (Sp, Fa) Study and performance of music for multiple bassoons and contrabassoon, including trios, quartets, quintets, and bassoon choir. One hour of rehearsal weekly. May be repeated for 99 hours.
quartets, quintets, and trumpet choir. Rehearsal 2 hours per week. May be repeated for 99 hours.

MUEN5761 Trombone Ensemble (Sp, Fa) Study and performance of music for multiple trombones, including trios, quartets, quintets, and trombone choir. Rehearsal 2 hours per week. May be repeated for 99 hours.

MUEN5791 University Bassoon Ensemble (Sp, Fa) Study and performance of music for multiple bas- sons and contrabassoon, including trios, quartets, quintets, and bassoon choir. One hour of rehearsal weekly. May be repeated for 99 hours.

Music History (MUHS)

MUHS3703 History of Music to 1800 (Fa) Survey of history of music in western culture from ancient Greece to 1800. Lecture 3 hours, listening/quiz laboratory 1 hour per week. Prerequisite: WCIV 1003 and WCIV 1013 and MLT 1003.

MUHS3713 History of Music from 1800 to Present (Sp) A study of the history of music in western culture from 1800 to present. Lecture 3 hours, listen- ing/quiz laboratory 1 hour per week. Prerequisite: WCIV 1003 and WCIV 1013 and MLT 1003 and MUHS 3703.

MUHS3733 Independent Studies (Sp, Su, Fa) (1-2) Independent projects in music history and literature. One hour credit per semester. Open to undergradu- ates in honors. May be repeated for 2 hours.

MUHS4523 Special Topics in Music History (Sp, Fa) Topics not covered in MUHS 3703 or 3713, including history of American music, music of Russia, and others. Satisfactory completion of the term paper in this class will fulfill the Fulbright College writing requirement. Prerequisite: MUHS 3703 and MUHS 3713. May be repeated for 99 hours.

MUHS4623 Music History Review (Sp, Su, Fa) Review of the course concepts for music history, with emphasis on individual periods as needed by students enrolled. Credit in this course may not count toward the Master of Music or Master of Education degree.

MUHS4703H Survey String Literature (Irregular) A survey of solo and chamber music literature involving stringed instruments. Prerequisite: MUAP 110 and WCIV 1013 and MLT 1003 and MUHS 3703.

MUHS4773 Survey of Vocal Literature II (Odd years, Sp, Fa) A survey in its historical context including media of performance; relation of notation to performance; rhythm; tempo; ornam- entation; and historical performance practice, aesthetics, and expression; and changing styles in music performance. Open to graduate students and to undergraduates in honors or consent of the instructor.

MUHS4803H Thesis (Sp, Su, Fa) (1-6) Thesis in Music Literature (Sp, Su, Fa) Research in music literature in the perform- ance field of the individual student. Prerequisite: MUHS 5720.

MUHS5577 Seminar in Medieval & Early Renaissance (Irregular) Intensive studies in music of Western Europe from early Christian times through the 15th century.

MUHS5577 Seminar in Music of the 18th Century (Odd years, Sp, Su, Intensive studies of late Baroque and Classical music.

MUHS5578 Seminar in Music of the 19th Century (Odd years, Sp, Su, Intensive studies in music of the 19th century.

MUHS5783 Seminar in Music of the 20th Century (Even years, Fa) Intensive studies in 20th century music. Prerequisite: MUHS 3703 or MUAP 110 and MUTH 3703. Current problems, techniques, and approaches to the prac- tice of musicology, including notation and editing problems. May be repeated for 99 hours.

MUHS5943 Seminar in Opera (Sp, Fa) Intensive studies in operatic literature.

MUHS5952 Choral History and Literature I (Odd years, Fa) Detailed study of choral history and literature from Gregorian chant to J.S. Bach.

MUHS5952 Choral History and Literature II (Even years, Sp) Detailed study of choral history and literature from J.S. Bach to the present.

MUHS5973 Seminar in Bibliography and Methods of Research (Sp, Fa) A survey of the methods and materials of musical research, including bibliography, meth- ods of analysis, and style in the presentation of research results. Open to graduate students and to juniors in Honors. Prerequisite: MUHS 6500V Master's Thesis (Sp, Fa) (1-6)

MUHS601V Lecture-Recital (Irregular) (1-6) The production and presentation (under the direction of the teacher(s) of historic instruments and other mem- bers of a graduate committee) of a performance (45 minutes minimum playing time) displaying historic practices of per- formance with lecture. The candidate will be responsible for making an archival tape of the performance available to the library, with 2 copies of a transcript of the lecture in thesis form to be retained by the University library.

Music Pedagogy (MUDP)

MUDP3801 Conducting I (Fa) A study of the elemen- tal techniques of choral and instrumental and choral groups. Prerequisite: MUTH 2603.

MUDP3811 Conducting II: Instrumental Music (Sp, Su) Continuation of study of the technique of conducting instrumental music groups. Prerequisite: MUDP 3801.

MUDP3861 Conducting II: Vocal Music (Fa) Continuation of study of conducting with emphasis on tech- niques of choral conducting. Prerequisite: MUDP 3801.

MUDP3871 Reed-Making (Fa) The making of reeds for oboe, bassoon, or clarinet, including the processing of cane from tubes. May be repeated for 2 hours.

MUDP447V Special Topics in Pedagogy (Irregular) (1-6) Subject matter not covered in other courses. With permission, may be repeated for credit if topics are different. May be repeated for 99 hours.

MUDP4781L Harpsichord Laboratory (Irregular) The tuning, care, and performance of harpsichords.

MUDP481V Conducting (Sp, Su, Fa) (1-4) Private lessons of 1/2 hour, and one hour conducting laboratory each week. Development of skills in conducting symphony, opera, oratorio, ballet and band repertoire. May be repeated for 99 hours.

MUDP4863 Piano Pedagogy (Irregular) Analytical study and discussion of the various approaches to piano pedagogy and an analysis of individual class instruction. Includes demonstration of principles through actual teaching of beginning, intermediate and upper level students.

MUDP499V Special Workshop in Music (Sp, Su, Fa) (1-2) Presented by visiting master-teacher in various fields of music performance, teaching and composi- tion. For this level it is expected that prospective students are professionals in the given field seeking additional knowl- edge and insights from acknowledged professionals. May be repeated for 2 hours. Prerequisite: MUAP 110 and MUEN 110.

MUDP502 Voice Pedagogy I (Sp, Su, Fa) Graduate-level study of the techniques and materials of teaching voice.

MUDP5682 Conducting (Sp, Su, Fa) (1-2) Private lessons of 1/2 hour and 1 hour conducting laboratory each week. Development of skills in conducting symphony, choral, opera, oratorio, ballet, and band repertoire. May be repeated for 18 hours.

MUDP584V Opera Workshop Techniques (Sp, Su) (1-2) A basic course in every phase of opera produc- tion, including staging, set design, music coaching, voice casting, and translation.

MUDP5885 String Techniques (Sp, Su, Fa) (1-2) A continuation of the undergraduate courses in techniques and materials for elementary and secondary school music teaching.

MUDP5886 Woodwind Techniques (Sp, Su) (1-2) A continuation of the undergraduate courses in techniques and materials for elementary and secondary school music teaching. Prerequisite: one year of similar class instruction in the field on the undergraduate level.

MUDP5891 Percussion Techniques (Sp, Su) (1-2) A continuation of the undergraduate class brass instrument course. Emphasis is placed on teaching methods, techniques, con- cepts, and materials. Prerequisite: one year of similar class instruction in the field on the undergraduate level.

MUDP599V Special Workshop in Music (Sp, Su, Fa) (1-6) Presented by visiting master-teacher in vari- ous fields of music performance, teaching and composition. Prerequisite: graduate standing. May be repeated for 6 hours.

Music (MUSC)

MUSC490VH Honors Essay (Irregular) (1-6) An honors research paper in Music History or literature, Music Theory, or Music Education. Open to seniors in honors.

Musicology (MUSY)

MUSY5113 Proseminar: Ethnomusicology (Odd years, Fa) An introduction to ethnomusicological study with practicum in technologies for fieldwork, preservation and presentation.

MUSY5123 Proseminar: Musical Notations, Transnotation and Analysis (Even years, Sp) Principles and practices for the study and musical analysis of gestural and oral “notations”, as well as standard notation, for music and dance.

MUSY5213 Proseminar: Historical Ethnomusicology (Even years, Fa) An introduction to historical ethnomusicological study with readings and discus- sion of seminal writings in the field.

MUSY5223 Seminar: Latin American Music (Even years, Sp) A study of the process and result of musical hybridization in South America and the Caribbean, from European colonization to the present.

MUSY5313 Proseminar: Topics in Asian and Middle Eastern Musics (Sp) Research seminars on selected topics, such as The Performing Arts in East Asia; and Music and Ritual. May be repeated. May be repeated for 2 hours.

MUSY5323 Seminar: Topics in Asian and Middle Eastern Poetry and Music (Irregular) Reading seminars on selected topics, such as Poetry and Music in Persian, Arabic and Turkish Cultures of the Islamic World; and Poetry and Song in Early East Asia. May be repeated. May be repeated for 6 hours.

MUSY5343 Seminar: Special Topics in Traditional Musics and Dance of Europe and the Americas (Irregular) Topics not covered in MUSY 5223 and MUSY 5423, including, but not limited to: European Folk Music; the
musical or scholarly legacy of a particular figure.

MUSY5353 Seminar: Topics in Systematic Musicology (Su) 2-3
Approaches to performing early Asian musics. Links with Summer School, the Ancient Asian Music Consort, and/or an Artist in Residence. May be repeated up to 3 hours.

MUSY5383 Ethnomusicology Summer Fieldwork (Irregular)
A minimum of 6 weeks summer fieldwork related to the student’s thesis, resulting in an extensive fieldwork report and the submission of collected material to be deposited in the University Library. Prerequisite: MUSY 5113.

MUSY5391 Ethnomusicology Performance Studies (Irregular) Applied vocal or instrumental studies related to the performance activities of the International Center for Research in Early Asian and Middle Eastern Musics. (Private study, as available) May be repeated for 2 hours.


MUSY5423 Seminar: History of Jazz (Fa) A study of the musical and cultural cross-fertilization which produced this influential twentieth-century art form, as well as a general examination of its major practitioners.

MUSY5610 Ethnomusicology Thesis (Sp, Su, Fa) (1-4) Open only for the Master of Arts in Ethnomusicology program. May be repeated for 6 hours.

MUSY6313 Internship in Asian and Middle Eastern Music (Sp, Su, Fa) Internship in Asian and Middle Eastern Music Preservation in the Asian and Mid- Eastern International Music Preservation Collection, Music Division of the Library of Congress. Prerequisite: MUSY 5973 and (MUSY 5123 or MUSY 5353).

MUSY6333 Advanced studies in Ethnomusicology (Irregular) Advanced level studies, individually tailored and supervised, including Ethnomusicology (MUSY 5113 or MUSY 5213); The Music or Dance of a Selected Area (prerequisite at least one of MUSY 5133, MUSY 5233, MUSY 5423, MUSY 5223, MUSY 5343, or HUMN 4243); Historic Performance Practices (prerequisite MUSY 5133); Historical East Asian Musicology (prerequisite MUSY 5313 or MUSY 5323); and Historical Central Asian or Middle- and Near-Eastern Musicology (prerequisite MUSY 5313 or MUSY 5323).

MUSY6363 Advanced Studies in Computer-Aided Asian Musicology (Irregular) Building a computational toolbox for research in early Asian musics. Prerequisite: MUSY 5353.
Course Descriptions

OMGT4223 Occupational Safety and Health Standards (Sp) Survey of existing and proposed standards by examining fundamental physical, economic, and legal bases. Performance vs. specific standards. Enforceability and data collection. National consensus and promulgation process. Includes a design project using a computer. Prerequisite: INEG 3313.

OMGT4303 Industrial Safety Administration (Irregular) Principles of accident and industrial disease prevention; organization and operation of industrial safety and hygiene programs; conformance with federal occupational safety and health regulations. Prerequisite: INEG 3313.

OMGT4313 Law and Ethics (Sp, Su, Fa) Analysis of the fundamental legal principles applicable in protecting the rights and interests of individuals and organizations. Emphasis on legal and ethical issues relevant to global engineering practice. Prerequisite: INEG 3313.

OMGT4323 Industrial Cost Analysis (Sp, Su, Fa) Use of accounting information for planning and control from a manager's viewpoint; cost accounting and other aspects of production costs; budgeting, depreciation, taxes, distribution of profits, securities, sources of corporate capital, and interpretation of financial statements. Not for graduate credit.

OMGT4333 Applied Statistics (Sp, Su, Fa) Fundamentals of probability and distribution theory with applications in managerial decision making. Descriptive statistics, probability, statistical distributions and hypothesis testing are included. Not for graduate credit.

OMGT4373 Quality Engineering and Management (Irregular) Provides the student with complete coverage of the functional area of "Quality Assurance"; ranging from the need for such a function, how it works, technologies utilized, and managerial approaches for insuring its effectiveness. Prerequisite: INEG 3313.

OMGT4623 Strategic Management (Irregular) Industry robots and robot programming, industrial logic control systems, programmable controllers for the control of work stations, and conveyor systems. On-line computer and microprocessors. Group technology, flexible manufacturing systems, and computer-integrated manufacturing laboratory required.

OMGT4553 Production Planning and Control (Sp) Operations research methods including control of purchased materials inventory; scheduling of a job shop, batch, and continuous production process for single and multi-item product lines; planning of work force and inventory under seasonal demand. Prerequisite: INEG 3313.

OMGT4583 Operations Productivity and Automation (Irregular) An examination of methods to improve industrial productivity including quality circles, robots, machine tool controllers, computer numerical control, and computer-assisted manufacturing.

OMGT4613 Production and Inventory Control (Irregular) Operations problems of production systems including control of purchased materials; scheduling of job shop, batch, and continuous production processes; planning of work force and production under seasonal demand. Inventory models and strategies are compared. Prerequisite: INEG 3313.

OMGT4623 Strategic Management (Irregular) Case studies covering the spectrum of strategic management issues facing typical organizations. Designed to provide analysis and synthesis experience to apply principles of operations management. Should be taken in last half of degree program.

OMGT4783 Project Analysis and Control (Irregular) Introduction to the Critical Path Method and Program Evaluation and Review Technique. Project planning and control methods; activity sequencing; time-cost trade-offs; allocation of manpower and equipment resources; scheduling activities; computer systems for PERT/CPM. Prerequisite: INEG 3313.


OMGT4873 Principles of Operations Research (Irregular) Surveys the mathematical models used to design and analyze operational systems. Contents include linear programming models, waiting line models, and management science. Applications of operations research are emphasized.

OMGT5003 Introduction to Operations Management (Sp, Su, Fa) An overview of the functional areas of Operations Management. Each class will consist of a capsule introduction to the principles and practices of the coursework in depth. Guest lectures. Required course for all majors in Operations Management.

OMGT5013 Supply Chain Management (Irregular) This course focuses on the planning, organizing, controlling and management of supply chain activities, including transportation, inventory management, order processing, purchasing, warehousing, materials handling, package design, and production. Emphasizes synthesis of the concepts, principles, and methods prevalent in marketing, production, accounting, purchasing, transportation, and multi-firm logistics planning for operations managers.

OMGT5113 Human Resource Management (Irregular) Human resource policies and practices are examined including legal foundations, classification and compensation plans, recruitment and selection processes, training, employment policies and morale, compensation, employee relations, and organization. Prerequisite: OMGT 5123.

OMGT5123 Finance for Operations Managers (Irregular) The role and function of finance for operations managers, including financial markets, interest rates, financial statements, cash flows, and performance evaluation; valuation of financial assets using time value of money and measurement of risk and return; capital budgeting; capital budgeting; cost of capital, capital structure, and dividend policy. Prerequisite: OMGT 5113.

OMGT5133 Operations Management I the Service Sector (Irregular) Review of the role of the operations manager in the service sector, e.g., health care systems, banking, municipal services, utilities, and postal service and others. Emphasizes the principles and methodologies applicable to the solution of problems within the service industries. Prerequisite: OMGT 5113.

OMGT5143 Contemporary Issues in Human Resource Management (Irregular) Emergent issues affecting employee well-being and workforce productivity. Impact of such issues as diversity, job evaluation, compensation, incentive pay, retention, and the aging workforce. Legal aspects of FMLA, EAP, and ADA are included. Students will develop a survey and an action plan to implement into an organization.

OMGT5223 Safety and Health Standards Research (Irregular) For graduate students who seek Certified Professional or Certified Industrial Hygienist status, or both. Includes review and development of computer databases for standards, interpretations, court decisions, and field memoranda. Test equipment and procedures for the determination of indoor and outdoor pollutants and physical environment noise levels are examined. Prerequisite: INEG 4223 or OMGT 4303. (Same as INEG 5223).


OMGT5373 Quality Management (Irregular) Implementation of modern participative quality management techniques in military and civilian operations. Includes quality control methods and control charts. Acceptance sampling plans with emphasis upon Department of Defense procurement standards.

OMGT5423 Operations Management & Global Competition (Sp) Studies of principles and cases in business/industrial administration in global competition. Survey of markets, national corporations, cultures, and customs. Discussion of ethics, professionalism, difference valuing, human relations skills, and other topics relevant to global engineering practice. Prerequisite: INEG 4433.

OMGT5433 Cost Estimation Models (Irregular) An examination of the methodologies for estimating and forecasting manufacturing costs. Types of cost recovery systems, work progress function and monitoring; cost improvement curves, determination of hourly rates, parametric estimating systems, and the development of software for computer-assisted estimating systems. Prerequisite: INEG 3513 and INEG 3833. (Same as INEG 5433)

OMGT5463 Economic Decision Making (Irregular) Principles of economic analysis with emphasis upon discounted cash flow criteria for decision making. Comparison of criteria such as rate of return, annual cost, and present worth for the evaluation of project alternatives. Prerequisite: OMGT 5003.

OMGT5503 Maintenance Management (Irregular) This course focuses on the planning, organizing, controlling and management of supply chain activities, including transportation, inventory management, order processing, purchasing, warehousing, materials handling, package design, and production. Emphasizes synthesis of the concepts, principles, and methods prevalent in marketing, production, accounting, purchasing, transportation, and multi-firm logistics planning for operations managers. Prerequisite: INEG 3313 or OMGT 5113.

OMGT577V Special Problems (Irregular) Application of previous course work knowledge to problem encountered in military and civilian operations. Problems are proposed by students according to individual interests and needs.

OMGT5823 Computer Applications (Irregular) Computer systems for analysis and control of operations management problems. Coding of operations models and currently available software systems. Microcomputers, minicomputers, and time-sharing systems. Networking and navigating the Internet as a resource for solving operations management problems. Prerequisite: OMGT 5113.

OMGT5873 Organization and Control (Irregular) Examines organization and control principles, structures, and controls. Functions of management-planning, organizing, staffing, directing, and controlling. Comparison of military and civilian environments for the implementation of these functions. Prerequisite: OMGT 5113.

OMGT600V Masters Thesis (Irregular) (1-6)

Public Administration (PADM)

PADM5803 Quantitative Methods (Fa) Data analysis techniques, including descriptive and inferential statistics and packaged computer programs. Prerequisite: appropriate undergraduate statistics course or equivalent and graduate standing.

PADM5813 Methods in Public Management Information (Sp) Quantitative approaches toward an understanding of public administration and statistical tools for analysis of administrative problems and programs. Prerequisite: PADM 5803 or equivalent and graduate standing.

PADM5823 Grantwriting for the Social Sciences (Irregular) This course will teach students the fundametns of obtaining grants from local, state and federal agencies. Prerequisite: PADM 5804 or equivalent.

PADM584V Directed Readings (Irregular) Topic varies. May be repeated for 6 hours.

PADM587V Professional Development (Sp, Su, Fa) (1-6) Encompasses internships, professional projects if individual is employed full-time and not eligible for an internship, conference and workshop participation, and other activities conducive to the students development as a public service professional.

PADM588V Directed Readings (Sp, Su, Fa) (1-3) Prerequisite: graduate standing.

PADM589V Independent Research (Sp, Su, Fa) (1-3) Prerequisite: graduate standing.

Physical Education Activity (PEAC)

PEAC1111 Adaptive Activities (Irregular) Instruction and participation in sports, recreational and fitness type activities.

PEAC1121 Adaptive Activities (Irregular) Instruction and participation in sports, recreational and fitness type activities.

PEAC1131 Beginning Swimming (Sp, Fa) Includes: essentials of water safety; basic strokes and techniques of swimming; and beginning diving.

PEAC1141 Aquatic Fitness (Irregular) Instruction and participation in various types of aerobic and strength conditioning activities.

PEAC1221 Beginning Jogging (Sp, Fa) Instruction and participation in jogging.
PEAC1231 Beginning Bowling (Sp, Fa) Instruction and participation in bowling.

PEAC1211 Beginning Volleyball (Sp) Instruction and participation in volleyball.

PEAC1251 Beginning Racquetball (Sp, Fa) Instruction and participation in racquetball.

PEAC1351 Beginning Golf (Sp, Fa) Instruction and participation in golf.

PEAC1371 Beginning Fencing (Irregular) Instruction and participation in fencing.

PHED2601 Aerobic Dance II (Irregular) A continuation of the study and practice of aerobic dance fundamentals with emphasis on improvement of physical fitness already possessed by the student. Prerequisite: PEAC 1801.

PHED1003 The Physical Education Profession: An Overview (Sp, Fa) An introduction to the teaching of physical education. May be repeated.

PHED2002 Teaching and Leading Outdoor Recreation and Experiential Activities (Sp, Fa) This course is designed to provide opportunities for the student to acquire the skills, teaching and leadership tenets across associated with outdoor recreational and experiential learning activities, including camping, orienteering, cooperative activities, and experiential learning activities. Includes a mandatory weekend trip. Prerequisites: PHED 1003 and PHED 2003.

PHED2003 Teaching Styles/Lesson Planning (Sp, Fa) This course presents a variety of teaching techniques that can be utilized to convey the K-12 physical education curriculum. Discussion focuses on proper planning procedures to assure efficient delivery of physical education lessons.

PHED2013 Teaching Progressions and Assessment of Advanced Skills (Sp, Fa) This course is designed to teach the progression and analysis of motor and sport skills. Specific emphasis is on the commonalities of various motor skills that apply to various sport movements. Prerequisites: PHED 2003 and PHED 2013.

PHED2122 Coaching Baseball (Irregular) Discussion and participation of presession and in-season training methods, skill development and administrative principles in the coaching of baseball. Prerequisite: sophomore standing.

PHED2142 Coaching Track and Field (Irregular) Discussion and participation of presession and in-season training methods, skill development and administrative principles in the coaching of track and field. Prerequisite: sophomore standing.

PHED2252 Coaching of Football (Irregular) Discussion and participation in presession and off-season training methods.

PHED2272 Coaching Basketball (Irregular) Discussion and participation of presession and in-season training methods, skill development and administrative principles in the coaching of basketball. Prerequisite: sophomore standing.

PHED2001 Practicum I (Sp, Fa) All 5-year teaching option majors serve as a coaching assistant at the K-12 level. Prerequisite: senior standing and PHED 3023.

PHED4001 Practicum II (Sp, Fa) All 5-year teaching option majors serve as a coaching assistant at the K-12 level. Prerequisite: senior standing and PHED 3023.

PHED4023 Class Management (Irregular) This course is designed to provide opportunities for the student to acquire an understanding of developmentally appropriate games and why they should be part of a quality physical education program. Prerequisites: PHED 2003 and PHED 2013 and junior standing.

PHED3022 Teaching Stunts and Tumbling (Sp, Fa) Instructional strategies for teaching public school students skills and tumbling skills. Prerequisites: PHED 2003 and PHED 2013 and junior standing.

PHED3032 Teaching Rhythms (Sp, Fa) Designed to teach K-12 Physical Education majors how to perform, teach, develop and implement rhythmic activity. Prerequisites: PHED 2003 and PHED 2013 and junior standing.

PHED3043 Teaching Fitness (Sp, Fa) Instructional strategies for teaching public school students about fitness concepts. Prerequisites: PHED 1003 and PHED 2013 and junior standing.


PHED3203 Principles and Problems of Coaching (Sp, Fa) A focus on the various aspects of coaching the athletes in contemporary society through an examination of research findings related to factors affecting performance. Attention to be given to principles, problems and understanding essential to the management of athletic contests. Prerequisite: junior standing.

PHED3373 Elementary Physical Education (Sp, Fa, Su) Program planning and techniques of teaching education activities to elementary students. Prerequisites: elementary and physical education teachers, supervisors, and principals. Prerequisite: junior standing. (Same as PHED 3373).

PHED3702 Measurement Concepts In Kinesiology (Sp, Fa) Measurement and assessment of physical education objectives. Corequisite: PHED 3074. (Same as KINS 3703) May be repeated.

PHED3903 Physical Education for Special Populations (Sp, Fa) Provides fundamental concepts and skills essential to physical education programming for handicapped students. Deals with definitions, handicapping conditions, developmental and behavioral problems, activities, games, and sports. Prerequisite: junior standing.

PHED4003 Teaching Team Sports (Sp, Fa) Instructional strategies for teaching team sport concepts to public school children. Corequisite: PHED 4053. Prerequisites: PHED 2003 and PHED 2013 and PHED 2023 and junior standing.


PHED4053 Teaching Team sports (Sp, Fa) Instructional strategies for teaching team sport concepts to public school children. Corequisite: PHED 4053. Prerequisites: PHED 2003 and PHED 2013 and PHED 2023 and junior standing.

PHED407V Physical Education Teaching Internship (Sp, Fa) (1-9) This internship involves supervised teaching experience in a K-12 setting. Students will be placed under the guidance of a mentor teacher at specific school sites within NW Arkansas. Internship will be done at both the elementary and secondary levels. Corequisites: PHED 4731 and PHED 4263. Prerequisites: Senior status in KINSBS K-12, PHED 2003, PHED 2004, PHED 2005, PHED 3043, PHED 3074, and PHED 3702. May be repeated.

PHED4263 Professional Issues in Physical Education (Irregular) This course focuses on the contemporary issues surrounding professional issues in physical education. Students gain experience critically reviewing issues relevant to the physical education teacher. Corequisites: PHED 407V and PHED 4731. Prerequisite: Senior status in KINSBS K-12, PHED 2003, PHED 2004, PHED 2005, PHED 3043, PHED 3074, and PHED 3702. May be repeated.

PHED474V Student Teaching-Elementary (Sp, Su) (1-12) This course involves supervised teaching experience during the student teaching experience in a K-12 setting. Students will be placed under the guidance of a mentor teacher at specific school sites within NW Arkansas. Internship will be done at both the elementary and secondary levels. Corequisites: PHED 4731 and PHED 4263. Prerequisites: Senior status in KINSBS K-12, PHED 2003, PHED 2004, PHED 2005, PHED 3043, PHED 3074, and PHED 3702. May be repeated.
the student teacher has an opportunity under supervision to observe, to teach, and participate in other activities involving school and the community.

PHED480V Workshop (Irregular) (1-6) May be repeated for 6 hours.

PHED511L Curriculum Development/Research/Statistics Laboratory (Fa) Cohort 5th year course. Application of content, principles, and concepts needed to become an effective researcher, evaluator, in physical education. (Cohort 5th year course.

PHED507V Cohort Teaching Internship (Sp, Su) (1-6) May be repeated for 6 hours.

PHED5213 Philosophical Foundation (Irregular) Prerequisite: Senior or Graduate status. Development of a set of assumptions about the nature of physical education and human movement phenomena. Special attention is given the development of qualitative observation techniques; and to collect data on behaviors in teaching, coaching, learning; to develop skills in systematic descriptive techniques of teaching effectiveness and of student learning. Prerequisite: 3 hours of philosophy. May be repeated for a maximum of 6 hours of credit, as content will vary. May be repeated for 6 hours.

PHIL1203 Reflective Thinking (Sp, Fa) Helping students acquire basic reasoning skills. Degree credit may not be earned for both PHIL 2003 and PHIL 2003H.

PHIL2003H Honors Introduction to Philosophy (Sp, Su, Fa) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relationship between appearance and reality, the forms and limits of human knowledge, freedom of the will, and standards of right and wrong. Includes both historical and contemporary readings. (Same as PHIL 2003,PHIL 2003H)

PHIL2003C Introduction to Philosophy (Sp, Fa) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relationship between appearance and reality, the forms and limits of human knowledge, freedom of the will, and standards of right and wrong. Includes both historical and contemporary readings. (Same as PHIL 2003,PHIL 2003H)

PHIL2003 Introduction to Philosophy (Sp, Su, Fa) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relationship between appearance and reality, the forms and limits of human knowledge, freedom of the will, and standards of right and wrong. Includes both historical and contemporary readings. (Same as PHIL 2003,PHIL 2003H)

PHIL2103 Logic (Sp, Su, Fa) Basic concepts of moral philosophy, including historical and contemporary literature concerned with such issues as ethical relativism vs. objectivism, duty, happiness, freedom, the role of the will and responsibility, facts and values, individual liberty and society. Application of theories to substantive questions. (Same as PHIL 2103)

PHIL2203 Logic (Sp, Su, Fa) Traditional and modern methods of deductive and inductive inference. Degree credit may not be earned for both PHIL 2203 and 2203H. (Same as PHIL 2203)

PHIL3010 Ethics and the Professions (Sp, Su, Fa) After a survey of standard theories of moral obligation, justice, and rights, the course focuses on specific moral problems that arise within engineering, and business, and professions. (Same as PHIL 3010)

PHIL311 Environmental Ethics (Odd years, Sp) The course addresses ethical questions about nature and the natural environment. Topics of discussion include anthropocentric and biocentric ethics, population control, obligations between future generations, animal rights, and the environment. Leopold's land ethic, deep ecology, and ecomivism.

PHIL3203 Philosophy and the Christian Faith (Irregular) This course will deal with philosophical issues that arise in Christian theology. Topics to be discussed may include the doctrine of the Incarnation, the Trinity, Atonement, and Hell, as well as the nature of God and the relationship between faith and reason. (Same as PHIL 3203)

PHIL390V Readings (Sp, Su, Fa) (1-6) May be repeated for 99 hours.

PHIL3923H Honors Colloquium (Sp, Su, Fa) Treats a special topic of issue offered as part of the honors program. Prerequisite: honors candidacy (not restricted to candidacy in philosophy). (Same as PHIL 3923H) May be repeated for 99 hours.

PHIL3933 Special Studies (Irregular) A course (not independent study) which covers a topic or a philosopher not usually presented in regular courses. (Same as PHIL 3923H) May be repeated for 99 hours.

PHIL3943 Philosophy and Physics (Irregular) Examination of the metaphysical and epistemological implications of such specific philosophical topics as an emphasis on twentieth-century physics. Topics covered may include the nature of space and time (particularly as described in relativity theory), the nature of the quantum mechanical world, and the temporal asymmetries found in thermodynamics and other areas of physics. Prerequisite: PHIL 3003.

PHIL4009 Honors Colloquium (Sp, Su, Fa) (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

PHIL4003 Ancient Greek Philosophy (Fa) Pre-Socratics, Socrates, Plato, and Aristotle. Prerequisite: 3 hours of philosophy.

PHIL4013 Platonism & Origin of Christian Theology (Sp) The study of Plato, Middle Platonism, and Neoplatonism, including Philo, Plotinus, and Proclus, and the influence of Platonism on philosophers of the 2nd-century, including Saint Gregory of Nyssa and also Psuedo-Dionysius. Prerequisite: 3 hours of philosophy.

PHIL4023 Medieval Philosophy (Fa) Includes Augustine, Bonaventure, Aquinas, Scotus, and Ockham.

PHIL4033 Modern Philosophy-17th and 18th Centuries (Sp) British and Continental philosophy, including Bacon, Descartes, Spinoza, Leibniz, Hobbes, Locke, Berkeley, Hume, and Kant.

PHIL4043 Nineteenth Century Continental Philosophy (Fa) Study of major Continental European philosophers of the 19th century including Hegel, Marx, Kierkegaard, Schopenhauer, Nietzsche. Emphasis on the nature of persons, the question of freedom, and the importance of self-expression, as well as views on knowledge, reality, and the nature of philosophy. Prerequisite: 3 hours of philosophy.

PHIL4063 Twentieth Century Continental Philosophy (Sp) Study of major figures (e.g. Husserl, Heidegger, Sartre, Foucault, Derrida, Latour). Emphasis on critical reflection, modern philosophy, existentialism, hermeneutics, critical theory, deconstruction) in 20th century French and German thought. Topics include human beings and their place in the world, the role of technology, the promise of critical reflection, and the responses to it.

PHIL4073 History of Analytic Philosophy (Sp) From Frege to recent figures, including Russell, Moore, Wittgenstein, Schlick, Carneap, Ayer, Ryle, Strawson, Quine, including a representative sample of works on the logical analysis of language, logical positivism, and ordinary language analysis. Prerequisite: 3 hours of philosophy.

PHIL4083 Existentialism (Sp) Readings in major existentialist figures (e.g. Kierkegaard, Nietzsche, Heidegger, Sartre, Merleau-Ponty). Emphasis on connections between the metaphysical views of these thinkers, their views of freedom, their conceptions of modernity, and their responses to it.

PHIL4093 Special Topics in Philosophy (Irregular) This course will cover subject matter not covered in regularly offered courses. May be repeated twice for a maximum of 6 hours of credit, as content will vary. May be repeated for 6 hours.

PHIL4113 Social and Political Philosophy (Sp) A study of philosophical theories of the state, social justice, and their connections with individuals.

PHIL4123 Classical Ethical Theory (Fa) Study of classical texts in the history of philosophical ethics from the ancient to the modern period. May include Plato, Aristotle, Butler, Hume, Kant, and Mill. Prerequisite: 3 hours of philosophy.

PHIL4133 Contemporary Ethical Theory (Fa) A study of contemporary texts in philosophical ethics from G.E. Moore to the present. May include Moore, Stevenson, Hare, Foot, and Rawls. Prerequisite: 3 hours of philosophy.

PHIL4143 Philosophy of Law (Sp) A philosophical consideration of the nature of law, theory of adjudication, concepts of legal responsibility, liberty and the limits of law, and selected moral-legal issues (abortion, affirmative action, etc.).
PHYS102L Physics Lab for Elementary Education Majors (SP) Class taken by elementary education majors. Students construct their own understanding of basic physical concepts in an inquiry-based laboratory setting. Many activities will be transferable for school classroom use. Can be taken independently from PHYS 1021L. Three hours per week and practicum two hours per week. Pre- or Corequisite: PHYS 1023H. Prerequisites: Lab component. May be repeated for 3 hours.

PHYS1023H Honors Physics and Human Affairs (Sp, Su, Fa) The great ideas of physics, together with their philosophical and social impact. Scientific topics include cosmology, relativity, quantum mechanics, philosophical and social topics include methods and values of science, problems related to energy sources, and implications of modern weapons. Non-mathematical. Designed for non-science majors. An inquiry-based laboratory is used to satisfy a 4-year physical science requirement for a B.A. degree. Students who have received credit in PHYS 2013 and 2003, or 2053 and 2073 cannot also receive degree credit in this course. Corequisite: PHYS 1011M. (Same as PHYS 1023)

PHYS1023 Physics and Human Affairs (Sp, Su, Fa) The great ideas of physics, together with their philosophical and social impact. Scientific topics include cosmology, relativity, quantum mechanics, philosophical and social topics include methods and values of science, problems related to energy sources, and implications of modern weapons. Non-mathematical. Designed for non-science majors. An inquiry-based laboratory is used to satisfy a 4-year physical science requirement for a B.A. degree. Students who have received credit in PHYS 2013 and 2003, or 2053 and 2073 cannot also receive degree credit in this course. Corequisite: PHYS 1011M. (Same as PHYS 1023)

PHYS2054 University Physics I (Sp, Su, Fa) A continuation of PHYS 2053 and 2073. Topics include electricity, magnetism, light and geometric optics. Lecture three hours per week and practicum two hours per week. Pre- or Corequisite: MATH 2544. Corequisite: Lab component. May be repeated for 3 hours.

PHYS2054H Honors University Physics I (Sp, Su, Fa) Continuation of PHYS 2053H. Introduces wave motion, temperature and heat, with calculus. Lecture three hours per week and practicum two hours a week (included in lab component). Pre- or Corequisite: MATH 2544. Corequisite: Lab component. May be repeated for 3 hours.

PHYS2054H Honors University Physics I (Sp, Su, Fa) Continuation of PHYS 2053H. Introduces wave motion, temperature and heat, with calculus. Lecture three hours per week and practicum two hours a week (included in lab component). Pre- or Corequisite: MATH 2544. Corequisite: Lab component. May be repeated for 3 hours.
Course Descriptions

Apparatus (SU) Students will learn mechanical and electronic techniques used in the design and fabrication of scientific apparatus and devices. Prerequisite: Permission of Instructor (subject to satisfactory grades in required courses).

PHYS5073 Mathematical Methods for Electromagnetics (FA) Mathematical methods used in fields of electromagnetics and magnetostatics. Prerequisite: MATH 3423 and PHYS 3414.

PHYS5083 Mathematical Methods of Physics II (Sp) Applications of matrices, tensors, and linear vector spaces to problems in physics. Introduction to groups and their representations, and symmetry principles in modern physics. Prerequisite: PHYS 5073 or MATH 5073. (Same as MATH 5083)

PHYS5093 Applications of Group Theory to Physics (SP) Application of group theory to topics in physics, especially to atomic/molecular and solid-state physics. Prerequisite: PHYS 5073

PHYS5111 Advanced Mechanics (Even years, Fa) Dynamics of particles and rigid bodies. Hamilton’s equations and canonical variables. Canonical transformations. Small oscillations. Prerequisite: PHYS 5073.

PHYS5111 Research Techniques Through Laboratory Rotations Graduate students will be introduced to detailed operational aspects of two Physics research laboratories through extensive observation of those laboratories’ operations and student work. Each student will manage and carry out each lab. Planning for starting a research project in the summer will take place in the final three week rotation period.

PHYS5213 Statistical Mechanics (Odd years, Fa) Classical and quantum statistical theories of matter and radiation. Prerequisite: PHYS 4333 and PHYS 5073 or PHYS 5413.

PHYS5253L Experiment and Data Analysis (FA) This course provides students with experience and formal instruction in many of the frequently used experimental techniques and methods by which experimental data are analyzed to extract quantitative information on physical parameters. Students will perform experiments, analyze data, and write lab reports. Prerequisite: Graduate Standing or Instructor Consent.

PHYS5333 Electrodynamics (SP) Wave solutions of Maxwell’s equations in free space, wave guides, and resonators; radiation and scattering; boundary waves and reflection; propagation of laser pulses; and high energy laser beams. Prerequisite: PHYS 3414 and PHYS 5073.

PHYS5363 Computational Science and Numerical Methods (FA) An introduction to numerical methods used in solving various problems in engineering and the sciences. May not earn credit for this course and MATH 4353 or MATH 4363. (Same as MATH 5363)

PHYS5413 Quantum Mechanics I (Fa) Non-relativistic quantum mechanics; the Schroedinger equation; the Heisenberg matrix representation; operator formalism; transformation theory; spinors and Pauli theory; the Dirac equation; applications to atoms and molecules; collision theory; and semiclassical theory of radiation. Prerequisite: PHYS 4073.

PHYS5423 Quantum Mechanics II (Sp) Continuation of PHYS 5413. Prerequisite: PHYS 5413.

PHYS5513 Atomic and Molecular Physics (Odd years, Sp) Survey of atomic and molecular physics with emphasis on the electronic structure and spectroscopy of 1 and 2 electron atoms and diatomic molecules. Includes fine and hyperfine structure, Zeeman and Stark mixing of states, collision phenomena, radiative lifetimes, and experimental techniques. Prerequisite: PHYS 4073 or PHYS 5413.

PHYS5523 Theory of Relativity (Irregular) Conceptual and mathematical structures of the special and general theories of relativity with selected applications. Prerequisite: PHYS 4073.


PHYS5673 Advanced Experimental Physics I (even years, Sp) Crystal lattice structure, lattice dynamics. Debye theory, electron theory of metals, band theory of solids, conductivity, and magnetism. Prerequisite: PHYS 4073 or PHYS 5413.

PHYS5713 Advanced Experimental Physics II (Odd years, Sp) Advanced experimental techniques. Prerequisite: PHYS 4073 or PHYS 5413.

PHYS5713 Quantum Mechanics III (Even years, Sp) Relativistic quantum mechanics, second quantization, with applications to quantizing electromagnetic fields and to many-body theory. Introduction to Feynman diagrams. Prerequisite: PHYS 5423.

PHYS5713 Quantum Mechanics III (Even years, Sp) Relativistic quantum mechanics, second quantization, with applications to quantizing electromagnetic fields and to many-body theory. Introduction to Feynman diagrams. Prerequisite: PHYS 5423.

PHYS5794 Lightwave Communication (Even years, Sp) A laboratory-based course in light propagation in planar and fiber waveguides, optical coupling, operation procedures, cultural impact on operations, and team-based problem solving. Prerequisite: PHYS 5800V.

PHYS5800V Master of Arts Research (Sp, Su, Fa) (1-6) Regular informal discussions of research reported in journals and monographs. Prerequisites: Graduate standing.

PHYS5800V Seminar (Sp, Su, Fa) (1-3) Regular informal discussions of research reported in journals and monographs. Prerequisites: Graduate standing.

PHYS5800V Seminar (Sp, Su, Fa) (1-3) Regular informal discussions of research reported in journals and monographs. Prerequisites: Graduate standing.

PHYS5800V Seminar (Sp, Su, Fa) (1-3) Regular informal discussions of research reported in journals and monographs. Prerequisites: Graduate standing.

PHYS5800V Seminar (Sp, Su, Fa) (1-3) Regular informal discussions of research reported in journals and monographs. Prerequisites: Graduate standing.
PLPA3004 Principles of Plant Pathology (Fa)
Prerequisite: PLPA 3004.

PLPA400V Research (Sp, Su) (1-6)
Original investigations of assigned problems in plant pathology. Prerequisite: PLPA 3004.

PLPA4093 Issues in Pest Management (Sp)
Lecture and discussion on local, regional, national and international issues of pest management, policy, ethics, environment, society and science (not for graduate credit). Prerequisite: must have completed 60 hours of coursework. (Same as CSES 4093, ENTO 4093)

PLPA4040 Plant Disease Control (Fa)
Principles, methods and mechanics of plant disease control. Emphasis is given to the integration of control measures and epidemiology of plant diseases. Lecture 3 hours per week. Prerequisite: PLPA 3004.

PLPA4333 Biotechnology in Agriculture (Fa)
Discussion of the techniques, applications, and issues of biotechnology as it is being used in modern agriculture. Coverage includes agricultural molecular biology, production of transgenic plants and animals, and new applications in the agricultural, food, and medical marketplace. Lecture and discussion, 3 hours per week. Prerequisite: PLPA 3004.

PLPA4373 Advanced Plant Pathology: Host-Pathogen Interactions (Odd years, Sp)
Presentation of important contemporary concepts relative to disease resistance and the physiology, biochemistry, and molecular biology of plant-pathogen interactions. Lecture 3 hours per week. Prerequisite: PLPA 3004 or equivalent course and graduate standing.

PLPA5313 Advanced Plant Pathology: Ecology and Economics (Even years, Sp)
Presentation of important contemporary concepts relative to the ecology and epidemiology of soil and foliar-borne plant pathogens. Lecture 3 hours per week. Prerequisite: PLPA 3004 and graduate standing.

PLPA5404 Diseases of Economic Crops (Su)
Diagnosis and management of important diseases of cotton, fruits, rice, trees, soybeans, wheat, and vegetables will be covered in a lecture, laboratory, and field format. Lecture 2 hours, laboratory 4 hours per week. Four 1-day field trips will be required. Corequisite: Lab component. Prerequisite: PLPA 395.

PLPA5532 Professionalism in Plant Science (Odd years, Sp)
Discussion of professionalism in science, science ethics and other topics associated with science as a profession such as research funding, writing for publication, career choices, and career development. Prerequisite: graduate standing.

PLPA5603 Plant Pathogenic Fungi (Odd years, Fa)
Plant Pathogenic Fungi is structured as an integrated lecture/laboratory class designed for students who are interested in developing an understanding and appreciation for taxonomy, biology, and ecology of plant pathogenic fungi and related saprobic fungi. Corequisite: Lab component. Prerequisite: PLPA 4424 or graduate standing.

PLPA5713 Introduction of Electron Microscopy (Sp)
The use of the electron microscope in biological research, including the preparation of various plant and animal specimens and their observation with the electron microscope. Lecture 1 hour, laboratory 4 hours per week. Prerequisite: graduate standing.

PLPA600V Master’s Thesis (Sp, Su) (1-6)
Prerequisite: graduate standing.

PLPA6203 Plant Virology (Odd years, Sp, Su)
Prerequisite emphasis is on recent advances in plant virology. Laboratory concerned with techniques and equipment used in plant virus studies, including transmission of viruses, characterization utilizing ultracentrifugation, spectrophotometry, electron microscopy, and serology. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: graduate standing.

PLPA6303 Plant Nematology (Even years, Sp, Su)
Nematology and their relationship to plant diseases, with consideration of identification, morphology, biology, distribution, association with disease complexes and control. Lecture 2 hours, laboratory 2 hours per week. Corequisite: PLPA 6300L. Prerequisite: undergraduate standing.

PLPA6503 Plant Bacteriology (Odd years, Sp)
Current concepts and techniques in plant bacteriology, including taxonomic, ecological and molecular aspects of plant pathogenic bacteria and their interactions with hosts. Lecture 2 hours, laboratory 2 hours per week. Corequisite: BIOL 2013 and BIOL 2011L. May be repeated for 3 hours.

Political Science (PLSC)

PLSC2003H Honors American National Government (Fa)
Survey of the history, basic ideas, structure, and political processes of the national government of the United States, including the fundamental relationships of the federal system. (Same as CSES 2003, PLSC 2003) Prerequisite: PLSC 2003.

PLSC2003 American National Government (Sp, Su, Fa)
Survey of the history, basic ideas, structure, and political processes of the national government of the United States, including the fundamental relationships of the federal system. Required of all political science majors. (Same as PLSC 2003) Prerequisite: PLSC 2003.

PLSC2013 Introduction to Comparative Politics (Sp, Su) (1-3)
Overview of contemporary and comparative political systems. (Same as PLSC 2013)

PLSC2203 State and Local Government (Sp, Fa)
Organization and functions of state and local governments in the United States, state governments, relations, administration, adjudication, and the organization and function of political parties on state and local levels. (Same as PLSC 2203) Prerequisite: PLSC 2213 Introduction to International Relations (Sp, Su) Interrelationships among political systems and the international system, theories of international behavior, political economy, conflict and peacemaking, the third world, international law and organizations, and the nature of the post-cold war world. Prerequisite: PLSC 2203, PLSC 2213 or BIOL 2013.

PLSC2303 Public Law (Sp, Su, Fa) (1-3)
Experience work in a public agency arranged by the student under the guidance of a faculty member. Paper required. May be repeated for 6 hours. Prerequisite: PLSC 2303 or BIOL 2303.

PLSC3103 International Organizations (Sp, Fa)
Principles and contemporary issues in the international system, with special attention to and analysis of selected principles of private international law relevant to such topics as the multinational corporation, international arbitration, commerce with Communist states, and the expatriation of foreign property. Prerequisite: PLSC 2003.

PLSC3823 Theories of International Relations (Sp, Fa)
Principles and contemporary issues in the international system, with special attention to and analysis of selected principles of private international law relevant to such topics as the multinational corporation, international arbitration, commerce with Communist states, and the expatriation of foreign property. Prerequisite: PLSC 2003.

PLSC3830 The Judicial Process (Irregular)
Analysis of the judicial process and the role of the judge in a democratic society. Emphasis will be placed on how judicial decisions are made, the role of the judge in a democratic society. Prerequisite: PLSC 2003.

PLSC3831 American National Government (Fa)
Analysis of American national government and politics, including policy making and implementation at the federal, state, and local levels. Prerequisite: PLSC 2003.

PLSC4093 Issues in Pest Management (Sp)
Prerequisite: graduate standing. May be repeated for 3 hours.

PLSC4095 Issues in Pest Management (Su)
Prerequisite: graduate standing. May be repeated for 3 hours.

PLSC4099 Internship (Sp, Su, Fa) (1-3)
Supervised experience in pest management. Prerequisite: graduate standing. May be repeated for 18 hours.

PLSC4301 Introduction to Comparative Politics (Sp, Su, Fa) (1-3)
Prerequisite: graduate standing. May be repeated for 3 hours.

PLSC4303 Survey of the Unity and Diversity in the Political Development of the Middle East (Sp, Su, Fa)
Survey of the unity and diversity in the political development of the Middle East, as evidenced in historical legacies, states form, civil society, social class, and political identity. May be repeated for 3 hours.

PLSC4353 Political Development (Fa)
Introduction to career systems, human resource planning and development, and public sector management; fiscal and personnel management; administrative practice. Prerequisite: PLSC 2003.

PLSC4353 Western European Politics (Fa)
Comparative analysis of Western European parliamentary systems with special attention to political institutions, constitutional arrangements, socio-economic structure, and the political and legislative processes in countries such as Britain, France, and Germany. Prerequisite: PLSC 2003 or PLSC 2013.

PLSC4373 Governments and Politics of Latin America (Fa)
Comparative survey of Latin American political institutions and political systems with special attention to the patterns and problems of political change and development in that area. Prerequisite: PLSC 2003.

PLSC4380 Scope and Methods of Political Science (Irregular)
The basic principles and assumptions of political inquiry (methodology) and research techniques for gathering and analyzing data about political phenomena. Prerequisite: PLSC 2003.

PLSC4380 International Organization (Fa)
The theory and practice of international organizations past and present, with emphasis on the United States and a critical examination of current trends. Prerequisite: junior standing.

PLSC4381 International Law (Sp)
Analysis of the traditional principles of public international law including the law of war, the law of sea and air, and the legal nature of statehood; and analysis of selected principles of private international law relevant to such topics as the multinational corporation, international arbitration, commerce with Communist states, and the expatriation of foreign property. Prerequisite: PLSC 2003.

PLSC4923H Honors Colloquium (Irregular)
Covers a special topic or issue, offered as part of the honors program. Prerequisite: honors candidacy in political science. May be repeated for 99 hours.

PLSC4933 Contemporary American Political Thought (Sp)
Prerequisite: honors candidacy in political science. May be repeated for 99 hours.

PLSC4933 Contemporary American Political Thought (Sp)
Prerequisite: honors candidacy in political science. May be repeated for 99 hours.

PLSC494V Readings in Political Science (Sp, Su) (1-3)
For advanced students who wish to study some
field of political science beyond the course offering available in that field. Prerequisite: junior standing. May be repeated for 6 hours.

PLSC3953 Ancient and Medieval Political Thought (Fa) leading political works by classical writers during ancient and medieval European history.

PLSC3973 Twentieth Century Political Thought (Fa) leading political thought including academic freedom, obligation, dissent, government and economy, politics and technology, alienation, anarchism, pacifism, positivism and existentialism within the general context of democratic-Marxist, fascist, and totalitarian regimes.

PLSC3983 Politics in Literature (Sp) Analysis of political theories and issues through extensive reading and discussion of selected works of literature. Prerequisite: PLSC 2003 or PLSC 2013.

PLSC399VH Honors Course (Sp, Su, Fa) (1-3) Prerequisite: junior standing. May be repeated for 6 hours.

PLSC400V Special Topics (Irregular) (1-3) Topics in political science not usually covered in other courses. May be repeated for 99 hours.

PLSC4053 Political Sociology (Fa) Analysis of political institutions and movements in relation to power, social class, race, and gender. (Same as SSCI 4050)

PLSC4193 Administrative Law (Sp) Legal aspects of the administrative process and the effect of legal principles and processes upon administrative decision-making. Emphasis is given to the limitation of administrative power, discretion and the judicial review of administrative decision. Prerequisite: PLSC 3103 or PLSC 4263.

PLSC4203 American Political Parties (Sp, Fa) The nature and history of the political parties in the United States with emphasis on party membership, organization, campaign techniques, finance and electoral alliances. Prerequisite: PLSC 3103.

PLSC4213 Campaigns and Elections (Irregular) This course examines the American electoral process. It is an empirical course that provides opportunities for original analysis of survey data and election returns. Emphasis is placed on the national and local election.

PLSC4223 The American Congress (Fa) Thorough examination of the constitutional role of the legislative branch under the Constitution; the internal procedures and personalities of the Senate and House; the central place of Congress in shaping domestic and foreign policy. Prerequisite: PLSC 2003.

PLSC4233 The American Chief Executive (Sp) Offices and roles of the President and state governors of the United States focusing on the evolution of the offices in terms of responsibilities and political leadership. Prerequisite: PLSC 3103.

PLSC4243 Minority Politics (Sp) Reviews political action and concepts of political activity by minority groups, focusing on contemporary political behavior.

PLSC4253 Public Law and the Constitution (Fa) United States Supreme Court decisions involving the functions and powers of Congress, the Supreme Court, and the President and federalism. Prerequisite: PLSC 3103.

PLSC4263 The Supreme Court and Civil Rights (Sp) United States Supreme Court decisions interpreting the political, economic, and civil rights of individuals and groups. Prerequisite: PLSC 3103.

PLSC4273 Political Psychology (Sp) Examines the role of the individual in the polity including basic psychological constructs of relevance to political action, the formulation and manipulation of political political orientations, the patterns linking the individual to the polity, and major modes of inquiry. Prerequisite: PLSC 3103.

PLSC4283 Federalism and Intergovernmental Relations (Sp) Analysis of inter-governmental relations in the American federal system. Discussions will focus on political, economic, and administrative aspects of policy changes of the pre-and post-Reconstruction eras.

PLSC4373 Political Communication (Sp) Study of the nature and function of the communication process as it operates in the political environment. (Same as COMM 4373)

PLSC440S Modern Europe (Sp) Comparative analysis of structures, processes and problems of selected Sub-Saharan African political systems.

PLSC4513 Creating Democracies (Even years, Fa) Analyses of the creation of democracies in Europe, South America, Asia, Africa, the Middle East, East Europe, and the former Soviet Union. Prerequisite: PLSC 2013.

PLSC4523 Systematic Analysis of Various Theories of Political Behavior (Sp) This course explores the politics of food production, processing, transportation, and consumption on a global level. (Same as ANTH 4183) (Same as ANTH 4183)

PLSC4543 Governmental and Political Institutions of Eastern Europe (Sp) Study of the politics of Eastern European nations primarily after World War II, with emphasis on the role of the period of communist rule and democratization. Prerequisite: PLSC 2003 or graduate standing.

PLSC4563 Government and Politics of Russia (Sp) Study of Russian and Soviet politics after 1917 and of the democratization of Russia and the other successor states. Prerequisite: PLSC 2003 or graduate standing.

PLSC4573 Gender and Politics (Even years, sp) Examines the significance of gender in politics. Includes discussion of the women's movement and feminist theory, but emphasizes the content and process of public policy as it relates to women and men. Focus is on the U.S. but final third is devoted to comparative topics. Prerequisite: PLSC 2003 or graduate standing.

PLSC4583 Political Economy of the Middle East (Sp, Su, Fa) Examines the links between politics and economics in the Middle East and the impact of that nexus on development. Analyses of global and regional integration, oil states, Islamic fundamentalism and oil states, authoritarian regimes and oil states, and resources and population movements to understand power and class in the area.

PLSC4593 Islam and Politics (Sp, Su, Fa) Compares contemporary Islamic political movements. Seeks to explain causes, debates, agendas, and strategies of Islamists in the political realm. Addresses sovereignty, the role of law, visions of the good state and society, and relations between the religion and political decencies. Focus on Middle East with comparative reference to other cases.

PLSC4803 Foreign Policy Analysis (Sp) Comparative analysis of foreign policy, with attention paid to explanations at a variety of levels, such as the individual, group, organizational, societal, systemic.

PLSC4813 Politics of the Cold War (Fa) Examines the cold war from the perspective of the international system during the cold war; American and Soviet perceptions of the cold war; domestic political considerations; impact of the cold war on the economy, culture, and society; end of the cold war; the post-cold war world.

PLSC4823 Foreign Policy of East Asia (Sp) This course provides an introduction to the international relations of two major East Asian states, China and Japan. Key topics include: China and Japan's interaction with the world political and economic systems; domestic sources of international behavior and major dimensions of foreign policy in the 1980s and 1990s.

PLSC4833 International Political Economy (Sp) This course provides an analysis of the interaction between politics and markets in the world economy. Its central objective is to illustrate how interactions have to be studied and been shaped by the development of the global economy.

PLSC4843 The Middle East in World Affairs (Sp) An analysis of geo-political and socio-economic characteristics of Middle Eastern societies and their impact on world economic and political order. Special attention to such issues as the Arab-Israeli conflict, the promotion of lasting peace in the region, impact of oil on world politics, the involvement of superpowers, rehabilitation of Palestinian refugees and the role of the United Nations.

PLSC4873 Inter-American Politics (Sp) An analysis of the political themes, regional organization, and hemispheric relations in the post-Cold War American system, with special emphasis on conflict and cooperation in the hemispheric policies of the American republics. Prerequisite: junior standing.

PLSC4903 Democratic Theory (Sp, Su, Fa) Analysis and comparison of classical and contemporary theories of democracy.

PLSC4923 Karl Marx: Life, Work, and Legacy (Sp) This course engages the major works of Karl Marx, and students will explore his influence on contemporary society.

PLSC498V Senior Thesis (Sp, Su, Fa) (1-6) PLSC499V Honors Essay (Sp, Su, Fa) (1-3) Not part of the 30 hours requirement for the major. May be repeated for 6 hours.

PLSC5103 Human Behavior in Complex Organizations (Fa) Review of the fundamental literature on organizational behavior, including various theories of motivation, job satisfaction, decision-making, and team building. Prerequisite: graduate standing.

PLSC5113 Seminar in Human Resource Management (Sp) Intensive study of public personnel policies and practices, including legal foundations, classifications and compensation plans, recruitment and selection processes, training, employment policies and morale, employee relations and organization. Prerequisite: graduate standing.

PLSC5213 Public Budgeting and Finance (Fa) Focuses on the budgeting process and governmental fiscal policy formulation, adoption, and execution. Prerequisite: graduate standing.

PLSC5133 Management of Service Sector Organizations (Sp) This course provides an overview of the principal management functions in public and nonprofit organizations. Topics include financial management, HR development, program development. The relationships among volunteer boards of trustees, fund raising, public relations, and program personnel are analyzed, and the complex environments with service sector agencies are explored. May be repeated for 3 hours.

PLSC5143 Administrative Law (Irregular) A seminar which examines the constitutional and statutory basis and authority of public organizations. Special attention focuses on the nature of the rule-making powers of public agencies and on executive, legislative, and judicial restraints on such activities. Also considered is the role, scope, and place of public regulatory activities. Prerequisite: graduate standing.

PLSC5153 Environmental Politics and Policy (Even years, Fa) Surveys recent patterns of environmentalism in the U.S. and explores the nature of policy making with regard to environmental and economic development issues. Several debates are presented, such as conservation vs. preservation, multiple use vs. sustainability, intergovernmental policy implementation, incentives, and free market experimentation.

PLSC5163 Public Policy (Sp) Research seminar examining the study of public policy making in complex human systems. Attention given to issues dealing with cognitive limitations in decision making, the use of reasoned persuasion vs. power, the appropriate application of technical analysis. Prerequisite: graduate standing.

PLSC5183 Comparative Public Administration (Irregular) A comparative study of administrative structures and processes in selected modern and modernizing political systems. Analysis includes the consideration of cultural, legal and political factors influencing the operation of bureaucratic institutions, development of policies, and methods of establishing and administering programs of social, economic and political development. Prerequisite: graduate standing.

PLSC5193 Seminar in Public Administration (Fa) Introduction to and synthesis of public administration theory, functions, history, public accountability and management concerns, economic impact of administrative decisions, current problems, and issues in the public sector. Prerequisite: graduate standing.

PLSC5203 Seminar in American Political Institutions (Fa) Research seminar dealing with selected aspects of the major governmental institutions in the United States. Prerequisite: graduate standing.

PLSC5213 Seminar in American Political Behavior (Fa) (Irregular) A seminar that explores the principal factors used on the basis of representative processes in American national politics, including political opinion, political leadership, political participation, voting behavior, political parties, and interest groups. Prerequisite: graduate standing.

PLSC5223 Seminar in Legislative Processes and Behavior (Fa) Research seminar dealing with legislative processes and behavior in the United States. Prerequisite: graduate standing.

PLSC5233 Disability Policy in the United States (Sp, Su, Fa) An analysis of public policy approaches to disability in the United States. Examines the political and philosophical origins of disability policy, the major challenges to disability legislation and its effects on policy stakeholders; describes recent policy initiatives; analyzes evolution of disability policy with context of changing societal, economic and political conditions. Prerequisite: graduate standing. (Same as RHAB University of Arkansas, Fayetteville)
PLSC5243 Seminar in State and Local Politics (Sp, Su, Fa) Resides seminar dealing with selected aspects of state and local institutions and policies such as comparative policy-making, public policy variations, and community power structures. Prerequisite: graduate standing.

PLSC5253 Political Communication (Irregular) Research seminar focusing on specific topics such as candidate image, diffusion of political information, or political symbolism. Prerequisite: graduate standing.

PLSC5258 Political Analysis (Fa) A selection of topics to provide the theoretical, conceptual and methodological foundation for the analysis of contemporary political systems. Prerequisite: graduate standing.

PLSC5259 Politics of the Middle East (Sp, Su, Fa) Explores the major lines of inquiry on the politics of the state and society in the context of endogenous and exogenous forces that have influenced conceptions of power, legitimacy, and identity. Prerequisite: graduate standing.

PLSC5523 Topics in Politics of the Middle East (Sp, Su, Fa) Indepth analysis of specific political phenomena in the contemporary Middle East. Inquiry will vary but may focus on gender, political economy, politics of inclusion and exclusion (democratization and authoritarianism), or the politics of multiple identities. Prerequisite: graduate standing.

PLSC5553 Russian and Soviet Political Systems (Sp) Study of the political systems of the Soviet Union and the successor states. Prerequisite: graduate standing.

PLSC5573 Political Change in Latin America (Even years) Seminar to focus on processes of change in Latin America while utilizing both North American and Latin American research frameworks and techniques that deal with the theory and measurement of stability and development. Prerequisite: graduate standing.

PLSC560V Teaching Foreign Cultures in Social Studies Curriculum (Su) (1-18) Extensive examination of foreign cultures (West Europe, USSR, China, Latin America) and methods of teaching about them in secondary school social studies. Four week residential summer institute. (Same as HIST 560V)

PLSC5803 Seminar in International Politics (Fa) Research seminar providing intensive coverage of selected topics in theories of international relations, the comparative study of foreign policy making, and international organizations. Prerequisite: graduate standing.

PLSC5833 Seminar in Contemporary Problems (Fa) Seminar with concentrated reading in selected and specialized areas of contemporary international relations. Prerequisite: graduate standing. May be repeated for 6 hours.

PLSC5843 International Legal Order (Sp) Analysis of distinctive characteristics of contemporary international law. Topics include role of legal order in controlling the use of force, the role of the nation-state, and the impact of external and political environment on growth of international law and relations among international political systems. Prerequisite: graduate standing.

PLSC5857 Directed Readings in Political Science (Sp, Su, Fa) (1-3) Prerequisite: graduate standing. May be repeated for 6 hours.

PLSC5913 Research Methods in Political Science (Fa) Methods relevant to research in the various fields of political science. Required of all graduate students in political science. Prerequisite: graduate standing.

PLSC592V Internship in Political Science (Sp, Su, Fa) (1-6) Internship in a local, state, regional, or federal agency. Paper required on a significant aspect of internship experience. Prerequisite: graduate standing.

PLSC593V Special Topics (Sp, Su, Fa) (1-3) Topics in political science not usually covered in other courses. Prerequisite: Graduate Standing. May be repeated for 3 hours.

PLSC595V Research Problems in Political Science (Sp, Su, Fa) (1-6) Research problems in political science. Prerequisite: graduate standing. May be repeated for 6 hours.

PLSC5963 Modern Political Thought (Fa) European political thinking since the rise of the nation-state and the modern world. Comparison to contemporary politics. Prerequisite: graduate standing.

PLSC5973 Contemporary Normative Political Theory (Sp) Analysis of current normative problems of political philosophy, including liberal theory, dissent, justification, sovereign authority, and major school of thought including Marxism, liberalism and western conservatism. Prerequisite: graduate standing.

PLSC600V Master’s Thesis (Sp, Su, Fa) (1-6) Doctoral level directed readings and research. May be repeated for 6 hours.

PLSC690V Directed Research (Sp, Su, Fa) (1-6) Doctoral level directed readings and research. May be repeated for 6 hours.

Portuguese (PORT) PORT1003 Elementary Portuguese I (Irregular) An introduction to basic Portuguese grammar with emphasis on listening comprehension and speaking skills. PORT1013 Intermediate Portuguese II (Irregular) A continuation of PORT 1003. Prerequisite: PORT 1003 or equivalent.

PORT2003 Intermediate Portuguese I (Irregular) Review of basic grammar and further development of oral and reading skills.

PORT2013 Intermediate Portuguese II (Irregular) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: PORT 2003 or equivalent.

Poultry Science (POSC) POSC1002L Introduction to Poultry Careers Laboratory (Fa) To expose the student to poultry career opportunities in the areas of science, business, production and processing. Efforts will be made to develop communication skills through written and oral and group activities. Lecture 1 hour, laboratory 3 hours per week.

POSC1023 Introduction to Poultry Science and Careers (Fa) Study of biologic sciences associated with poultry and to career areas in poultry. Topics will include genetics, reproductive and digestive anatomy, egg formation and embryology, physiology, housing, and ventilation. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component.

POSC2003 Fundamentals of Food Microbiology (Sp, Su, Fa) The impact of intrinsic or extrinsic factors on bacteria will be examined. Course information will address the basis of the Hurdle Theory or creating multiple barriers to growth, and will also set the stage for understanding predictive microbiology. Factors discussed included redox potential, water activity, pH, time and temperature. Web-based. Prerequisite: instructor permission.

POSC2353 Poultry Production and Management (Sp) Students will be introduced to the management practices used in production of young and adult chickens, turkeys, and other poultry with special emphasis on broiler, breeder, and market egg production. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: POSC 1023.

POSC2363 Breeder and Layer Management (Sp) Study of management practices used in production of adult chickens, turkeys, and other poultry with special emphasis on breeder and market egg production. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component.

POSC3013 Exotic Companion Birds (Odd years, Fa) Topics include basic care, health, breeding, bird evolution, anatomy, and nutritional management of common, kept exotic companion birds, including parrots, cockatoos, macaws, finches, canaries, and pigeons. Discussion will include housing and care for individual pet birds and large scale breeding and production. Lecture/discussion 3 hours per week. Prerequisite: BIOL 1543.

POSC3032 Animal Physiology I (Fa) Fundamental aspects of nervous/bone/tissue systems and the cardiovascular system. The normal structures and functions of these systems will be emphasized. Lecture 2 hours per week. Prerequisite: BIOL 1543 and CHEM 1123 or CHEM 1074. (Same as ANSC 3032).

POSC3042 Animal Physiology II (Sp) Fundamental aspects of renal, respiratory, digestive, and endocrine physiology will be covered. The normal structure and function of these systems will be emphasized. Lecture 2 hours per week. Prerequisite: ANSC 3032 or POSC 3032. (Same as ANSC 3042).

POSC3123 Principles of Genetics (Fa) Principles of heredity, with special emphasis on the improvement of farm animals. Lecture 2 hours per week. Prerequisite: BIOL 1543 and MATH 1203 or higher. (Same as ANSC 3213).

POSC3223 Poultry Diseases (Fa) Common diseases affecting poultry reared under commercial conditions will be covered including diagnosis, therapy and prevention.
by all poultry science majors. Prerequisite: junior standing.

POSC500V Special Problems (Sp, Su, Fa) (1-6) Work related to problems of poultry industry. Prerequisite: graduate standing.

POSC510V Special Topics in Poultry Sciences (Irregular) (1-4) Topics not covered in other courses or a more complete study of specific topics in poultry sciences. Prerequisite: graduate standing. May be repeated for 99 hours.

POSC5123 Advanced Animal Genetics (Even years, Sp) (3) Study of genetic principles. Lecture 3 hours per week. Prerequisite: POSC 3123 or ANSC 3123. (Same as ANSC 5123)

POSC5143 Biochemical Nutrition (Even years, Fa) (3) Analysis of food nutrients and physiological functions and their chemical analysis. Lecture 2 hours. Prerequisite: POSC 3143. (Same as ANSC 4143 or BIOL 3433)

POSC5152 Protein and Amino Acid Nutrition (Even years, Sp) Students will be introduced to the basic processes of protein digestion, amino acid absorption, trans- port, metabolism, and utilization along with how biochemical function of proteins and their dynamic state affect nutritional status for animals and man. Prerequisite: CHEM 3813. (Same as ANSC 5143)

POSC5153 Domestic Animal Bacteriology (Fa) A study of bacterial pathogens and domestic livestock. Lecture 3 hours per week. Prerequisite: POSC 3153 or BIOL 3433.

POSC5343 Advanced Immunology (Sp) Aspects of innate, cell-mediated, and humoral immunity in mam- malian and avian species. Molecular mechanisms underlying the function of the immune system are emphasized. A course in the role of immune system in health and disease. Prerequisite: CHEM 3813 or BIOL 3433 or BIOL 4713.

POSC5742 Advanced Poultry Diseases (Sp) The most important diseases of poultry will be covered in depth and the course will focus on understanding mecha- nisms of pathogenesis, diagnostic techniques and prin- ciples of prevention. Lecture/discussion 2 hours per week with Kodachrome slides and microscopic slides utilized. Prerequisite: POSC 3223.

POSC5743L Advanced Analytical Methods in Animal Sciences Laboratory (Fa) Introduction into the theory and application of current analytical techniques used in animal research. Two 3-hour laboratory periods per week.

POSC5752L Advanced Poultry Diseases Laboratory The course covers laboratory tech- niques utilized for the isolation, identification and diagnosis of poultry diseases with a microbial cause. Students will learn diagnostic virology, bacteriology, serology and mycol- ogy. Laboratories 3 hours twice weekly and then as needed to complete assignments. Prerequisites: POSC 3223 and POSC 5742.

POSC5763 Protozoan Parasites of Domestic Livestock and Companion Animals (Even years, Fa) Course topics will include economically and medically important protozoan parasites of domestic livestock and companion animals, with an emphasis on their significance for animal health. Lecture/discussion 3 hours per week. (Same as ANSC 5763). Prerequisite: general undergraduate biology and chemistry. (Same as ANSC 5763)

POSC5853 Advanced Meats Technology (Even years, Su) An intensive study of processed meats, relating the science, technology, and quality of further processed meat and poultry products. Product development, sensory and chemical analysis, microbiology, nutritional aspects, and product quality. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: ANSC 3613 or POSC 4314. (Same as ANSC 5853)

POSC5873 Molecular Analysis of Foodborne Pathogens Utilization of culture and molecular detection and identification of foodborne pathogens, the molecular response of foodborne pathogens to their envi- ronments, functional genomic approaches, and analysis of complex microbial communities. Lecture/discussion 3 hours per week.

POSC5901 Graduate Seminar (Sp, Fa) Critical review of the student’s research, literature pertaining to the field of poultry science. Oral reports. Recitation 1 hour per week. Prerequisite: senior standing.

POSC5922 Neuroscience (Fa) Course covers cellular aspects of brain functions and comparative neuroanatomy between mammals and birds. Specific topics include coverage of ion channels, membrane potentials, action potentials, synaptic integration, neurotrans- mitters, major brain regions of mammals and birds, sensory systems and the autonomic nervous system. Lecture 3 hours; Neuroscience Journal Club 1 hour per week (for first 8 weeks of semester). Pre- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: ANSC/POSC 3032 and ANSC/POSC 3042. (Same as ANSC 5922)

POSC5932 Cardiovascular Physiology of Domestic Animals (Fa) Cardiovascular physiology, including mechanisms of heart function and excitation, and blood vessel mechanisms associated with the circulatory system in domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for second 8 weeks of semester). Pre- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: ANSC/POSC 3032 and ANSC/POSC 3042. (Same as ANSC 5932)

POSC5933 Environmental Physiology of Domestic Animals (Odd years, Fa) Study of the environment of domestic animals and its effect on physiologi- cal systems that affect maintenance, growth, production, and reproduction. Lecture 3 hours per week. Prerequisite: (ANSC 3032 or POSC 3032) and BIOL 3813.

POSC5942 Endocrine Physiology of Domestic Animals (Fa) Endocrine physiology, including mecha- nisms of hormone secretion, function, and regulation. Mechanisms of hormone production and hormone system will be discussed for domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for second 8 weeks of semester). Pre- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: ANSC/POSC 3032 and ANSC/POSC 3042. (Same as ANSC 5942)

POSC5952 Respiratory Physiology of Domestic Animals (Sp) Respiratory physiology, including mecha- nisms of lung ventilation and gas exchange. Mechanisms associated with the interaction of the respiratory system with other bodily systems in domestic animals and poultry will be discussed. Lecture 3 hours; drill 1 hour per week for first 8 weeks of semester. Pre- or Corequisite: CHEM 3813. Corequisite: Drill component. Prerequisite: ANSC/POSC 3032 and ANSC/POSC 3042. (Same as ANSC 5952)

PSYC2003H Honors General Psychology (Sp, Fa) Introduction to the fundamental principles of psychology and to the elementary principles of learning, motivation, emotion, sensation, and individual differences. Students will be expected to complete a research requirement. (Same as PSYC 2003)

PSYC2003 General Psychology (Sp, Fa) Introduction to basic psychological processes and behavior and to the elementary principles of learning, motivation, emotion, sensation, and individual differences. Students will be expected to complete a research requirement. (Same as PSYC 2003)

PSYC2013 Introduction to Statistics for Psychologists (Sp, Fa) Introduction to the descriptive and inferential statistics commonly used by psychologists. Prerequisite: PSYC 2003. (Same as STAT 2031)

PSYC3013 Social Psychology (Sp, Fa) Introduction to the problems, theories, and experiments of social psychol- ogy. Prerequisite: PSYC 2003. (Same as PSYC 3013)

PSYC3023 Abnormal Psychology (Sp, Fa) Causes and treatment of the major forms of abnormal behavior. Prerequisite: PSYC 2003. (Same as PSYC 3023)

PSYC3033 infancy and Early Childhood (Fa) Psychological factors influencing development from the prenatal period through 5 years of age. Emphasizes interac- tion of heredity and environmental influences on personality, perception, learning, motivation, cognition, and socialization. Prerequisite: PSYC 2003. (Same as PSYC 3033)

PSYC3057T Psychrfer Course

PSYC3057 Psychology of Business and Industry (Irregular) Application of psychological principles to the study of business and industry with emphasis on employee morale and attitudes, labor turnover, industrial rela- tions, safety, fatigue, etc. Prerequisite: PSYC 2003. (Same as PSYC 3053)

PSYC306V Special Readings and Projects (Sp, Su, Fa) (1-4) For undergraduate majors in psychology. May be repeated for 99 hours.

PSYC3073 Research Methods (Sp, Fa) Training in the execution and interpretation of experiments using the clas- sical experimental designs. Limited enrollment. Prerequisite: PSYC 2013.

PSYC3083 Research in Applied Psychology (Irregular) A lecture and laboratory course dealing with the application of psychological research methods to practi- cal problems. Prerequisite: PSYC 3073.

PSYC3093 Childhood and Adolescence (Sp, Fa) Psychological factors influencing development from age 6 to early adulthood, with emphasis on cognitive, personality, and psycho-social processes. Prerequisite: PSYC 2003. (Same as PSYC 3093)

PSYC3103 Cognitive Psychology (Sp) Introduction to theories and research in cognition including memory, lan- guage, and problem-solving. Prerequisite: PSYC 2003.

PSYC3138 Research in Psychological Assessment (Irregular) A lecture and laboratory course dealing with the application of psychological assessment methods commonly used in social psychology as well as experience involving the design, conduct, analysis, and interpretation of research projects. Prerequisite: PSYC 2003.

PSYC3283 Research in Social Psychology (Irregular) A lecture and laboratory course dealing with research methods commonly used in social psychology as well as experience involving the design, conduct, analysis, and interpretation of research projects. Prerequisite: PSYC 3073.

PSYC3383 Research in Developmental Psychology (Irregular) A lecture and laboratory course dealing with research methods dealing with developmental research with selected research topics and laboratory experience involving the design, conduct, and analysis of research on selected developmentally-related problems. Prerequisite: PSYC 3073.

PSYC3483 Research in Physiological Psychology (Irregular) A lecture and laboratory course dealing with techniques for investigating the relationship between brain functions and behavior in both human and ani- mals. Prerequisite: PSYC 2003. Introduction to an ongoing research project using laboratory rats. Prerequisite: PSYC 3073.

PSYC3583 Research in Personality (Irregular) A lecture and laboratory course dealing with methodologies for the study of personality. Includes an overview of the major research projects including reviews of literature, application of method- ology, and writing of reports will be conducted. Prerequisite: PSYC 3073.

PSYC3583 Research in Perception (Irregular) A lecture and laboratory course dealing with research methods applied to the study of perception. Emphasis on application of psychological methods in the study of perception. Prerequisite: PSYC 3073.

PSYC3783 Research in Cognition (Irregular) A lecture and laboratory course dealing with the design, con- duct, and analysis of experiments in the area of memory, language, and other aspects of more complex human infor-


**Public Policy (PUBP)**

PUBP6001 Pro-Seminar (Fa) An introduction to the field of public policy and to the program. The seminar will address topics such as the meaning of public policy, policy research, the dissertation process, and particular issues of public policy concern. Prerequisite: admission to program.

PUBP6012 Legal Research (Fa) This course examines primary and secondary level materials and techniques for effective legal research in print and electronic formats.

PUBP6023 Law and Public Policy (Sp) This course focuses on the legal aspects of public policy, with emphasis on the regulatory process and its legal constraints. Also considered are the professional aspects of administrative decision making, judicial review, legislative oversight, and public access to government information. Co- or Prerequisite: PUBP 6012.

PUBP6103 Policy Leadership Seminar (Fa) This interdisciplinary seminar will explore the relationship between public policy, administration, and organizations in the community. Stakeholder groups will be considered as part of the newer approaches to practice-driven scholarship. The class will examine decisions to design making, strategic management and policy leadership in complex inter-organizational and inter agency settings.

PUBP6113 Agenda Setting and Policy Formulation (Sp) This course is a seminar on agenda and policy formation focusing on the classical theoretical and empirical literature. The course is designed to introduce graduate students to a variety of theories, concepts, and ideas related to the field of public policy.

PUBP612V Research Problems in Policy (Sp, Su, Fa) (1-6) May be repeated for 6 hours.

PUBP6134 Capstone Seminar in Public Policy (Sp) This seminar is designed to integrate various policy interests in a specific community based project.

PUBP6301 Policy and Administrative Ethics (Sp) This class will introduce the broad subject area of ethics in public policy and administration to the program. The seminar will provide the individual with the basic knowledge of ethics and mechanics of officiating flag football and volleyball.

PUBP3802 Evaluation of Therapeutic Recreation Practice (Irregular) (1-2) Prerequisite: candidacy. May be repeated for 18 hours.

**Reading (RDNG)**

RDNG560V Workshop (Irregular) (1-8) May be repeated for 18 hours.

RDNG624V Internship (Irregular) (1-18)

RDNG605V Independent Study (Sp, Su, Fa) (1-6)

**Recreation (RECR)**

RECR1003 Professional Foundations of Leisure (Fa) An analysis of the historical and philosophical development of recreation and leisure. Theories of play, recreation, and leisure are studied. Economic, political, technical, and social forces are examined as these influence recreation, parks, and leisure services is examined in context with diverse delivery systems.

RECR1023 Recreation and Natural Resources (Fa) An examination of the use and management of natural resources for outdoor recreation with consideration of multiple use, environmental, risk management, and other current considerations. Several field visits will be required as part of the class, including a weekend outing.

RECR201V Recreation Practicum (Sp, Su, Fa) (1-3) Students are assigned to assist in leisure-oriented programs for exposure to organizational structure, services, and programming of cooperating recreational agencies. Students may take 1-3 hours per semester; each credit hour is a 45-hour experience. Students must complete 3 different experiences before internship. Prerequisite: RECR 1003. May be repeated for 99 hours.

RECR2063 The Commercial Recreation and Tourism Enterprise (Fa) Examination of the commercial recreation and tourism industries. The operational requirement of a wide range of recreation businesses will be studied. Case study and field investigation methods will be emphasized.

RECR2102 Hunter Education and Safety (Irregular) Provides the individual with knowledge and skill in the sport of hunting. Safety rules in both hunting and the use of firearms are stressed.

RECR2813 Leadership Techniques in Recreation (Fa) Development of knowledge related to leadership theory, group dynamics, and face-to-face leadership techniques. Students gain an understanding of leadership theories as they are applied in a field setting.

RECR3002 Officiating Flag Football and Volleyball (Irregular) Provide the individual with the basic knowledge of sport rules and mechanics of officiating flag football and volleyball.

RECR3012 Officiating Basketball, Softball, and Baseball (Irregular) Provide the individual with the basic knowledge of sport rules and mechanics of officiating basketball, softball, and baseball.

RECR3833 Program Planning in Recreation (Sp) Development of the fundamentals of program planning using modern techniques of identifying and analyzing program activity areas and community needs. Includes program development and application with a variety of population groups and representative leisure service areas. Prerequisite: RECR 1003 and RECR 2813.

RECR3843 Planning, Design, and Maintenance for Recreation (Sp) Planning concepts, design principles, and maintenance techniques are emphasized. Also, techniques are utilized to enhance and extend facilities in maintenance of facilities are included. Prerequisite: RECR 1003 and RECR 3833.

RECR3853 Leisure Behavior (Fa) An examination of individuals and groups who are developmentally delayed. The emphasis is placed on leisure behavior, values, and attitudes toward the delivery of recreation programs and services.

RECR3873 Sport and Recreation Risk Management (Fa) In-depth look at risk management and related legal concerns of recreation and sport administration. Prerequisite: RECR 3833 and junior standing.

RECR4003 Innovative Practices in Recreation (Sp) Management techniques for recreation programs and facilities. Prerequisite: RECR 3833.

RECR4013 Contemporary Issues in Leisure (Sp) Discussion of selected topics and review of current literature in the recreation field. Analysis of current trends and professional issues are emphasized. Certification at the instructor level or higher in at least 2 areas of expertise must be completed before a grade is assigned in this course. Prerequisite: senior standing.

RECR405V Independent Study in Recreation (Sp, Su, Fa) (1-3) Provides student an opportunity to pursue special study of research problems. May be repeated for 99 hours.

RECR4083 Research and Evaluation in Recreation (Sp) An introduction to the applied methods and techniques of research and evaluation in leisure studies and services. General consideration given to research applications such as needs assessment, evaluation models and marketing studies. Emphasis placed on the logic underlying the research process.

RECR4093 Fundamentals of Therapeutic Recreation (Sp) An introduction to the field of therapeutic recreation. This survey encompasses history, philosophy, programs, treatment, research, populations served, and professional aspects of therapeutic recreation practice. Requirements are different for graduate credit.

RECR4263 Aquatic Facilities Management (Irregular) Prepares students to organize, administer, and supervise aquatic programs and staff, and performs in school, community, and camp settings.

RECR440V Internship (Sp, Su, Fa) (1-12) This experiential based course requires 40 hours per week of work in an approved agency for a full semester. It is recommended that students register for the summer session after completion of their coursework. Prerequisite: RECR 3873.

RECR4503 Seminar (Irregular) May be repeated for 3 hours.

RECR5003 Graduate Prerequisites (Fa) Gives students entering a recreation degree program with no background the necessary understanding of the recreation field. This course will not count toward a graduate degree in recreation.

RECR5213 Social Psychology of Recreation (Irregular) Application of social psychological theory to leisure, recreation, and travel behavior. Additional emphasis placed on the contribution of this theory to current practice in the recreation and tourism field.

RECR5223 Applied Leisure Behavior (Irregular) Examines antecedents and consequences of leisure behavior from a social psychological perspective. Emphasis on assisting recreation managers to facilitate quality leisure experiences in their agencies programs.

RECR5273 The Intramural Sports Program (Odd Years, Fa) Historical development, aim and objectives, organization, administration, roles of competition, program of activities, schedule making, scoring plans, rules and regulations, awards, and special administrative problems.

RECR5293 Sports Management (Fa) Deals primarily with high school athletics and considers historical development, objectives, controlling agencies, eligibility and contest regulations, local organization and administration, staff program, finances, inventories, facilities and equipment, safety, legal aspects, public policy, and public relations.

RECR5433 Medical Aspects of Disability (Irregular) Orientation to medical and medically related aspects of various disabling conditions with emphasis on the severely disabled. (Same as PHAB 5433)

RECR5453 Psychological Aspects of Disability (Irregular) Intensive study of the psychological aspects of adjustment to atypical physical and prolonged handicapping conditions. (Same as PHAB 5453)

RECR5473 Techniques in Therapeutic Recreation (Irregular) Advances the student’s understanding and application of therapeutic recreation techniques. It provides knowledge and the opportunity to apply skills for the student to gain competencies necessary for the provision of therapeutic recreation services. Prerequisite: RECR 4093.

RECR5483 Treatment Planning in Therapeutic Recreation (Irregular) Prepares students with the skills and understanding to apply the “IT Process” (assessment, planning, implementation, evaluation) in the development of individual client treatment plans in Therapeutic Recreation. Prerequisite: RECR 4093.

RECR5493 Trends and Issues in Therapeutic Recreation (Irregular) Advances the student’s knowledge of issues and concerns that moderate therapeutic recreation practice. Students are expected to critically examine and discuss each issue in an effort to develop a sound, practical philosophy of therapeutic recreation. The ultimate goal is to prepare the student to enter the profession confident in his or her ability to provide exemplary services. Prerequisite: RECR 4093.

RECR560V Workshop (Irregular) (1-3) May be repeated for 3 hours.

RECR574V Internship (Irregular) (1-3)

RECR5813 Principles of Recreation (Su) Considers history, philosophy, current trends, basic issues, and fundamental principles of recreation. Using the principles as basic criteria, students make critical appraisals of current practices in organization and administration of recreation programs, program content, leadership methods, and evaluative procedures.

RECR5823 Outdoor Recreation Program (Su) Considers the values and scope of outdoor recreation programs. Attention is given to the influence of geographical factors, land use, standards, economics, and legislation on program planning and operation.

RECR5833 Recreation for Special Populations (Irregular) Skills, knowledge, and concepts within recreation which are appropriate to planning and implementing recreation programs and services for the handicapped.

RECR5843 Tourism (Even Years, Fa) Explores major concepts of tourism to discover what makes tourism work, how tourism is organized, and its social and economic effects.

RECR5853 The School and Community Recreation Program (Sp) Nature, background, significant trends in recreation, relationship of school and community. Attention is given to the influence of social, economic, and educational factors, land use, standards, economics, and legislation on program planning and operation.

RECR5863 Operation of Commercial Recreation Enterprise (Irregular) Explores the operational requirements of commercial recreation enterprises. Students analyze the current status and future prospects of various recreation enterprises with respect to operational and financial requirements, and market orientation.

RECR5883 Recreation Services Promotion (Fa) Examines specific strategies for promoting recreation programs in the local community.
Rehabilitation Education (RHAB)

RHAB533 Counseling Persons Who Are Deaf or Hard of Hearing (Sp, Fa) Focuses on the application of basic principles underlying all forms of therapeutic interaction to professional counseling practices with individuals who are deaf or hard of hearing.

RHAB534 Supervised Rehabilitation Counseling (Sp, Su, Fa) (1-3) Gives the student practice in counseling under supervision with rehabilitation clients in selected settings and agencies.

RHAB535 Hearing Impairment and Human Behavior (Sp, Fa) Focuses on an interdisciplinary study of the impact for profound hearing loss on the educational, psychological, social, and vocational functioning of persons who are deaf or hard of hearing.

RHAB5363 Employer Relations and Placement Practicum (Sp, Su, Fa) Students address the placement needs of rehabilitation agencies and their clients by implementing the RehabMark approach to employer development.

RHAB540 Counseling Theories and Techniques Applied to the Rehabilitation Counseling Setting (Sp) Includes an experiential component with critical analyses.

RHAB541 Group Counseling in a Rehabilitation Setting (Su) This course combines theoretical and experiential components of group counseling in settings unique to the practice of rehabilitation counseling.

RHAB5423 Vocational Rehabilitation Foundations (Fa) Survey of the philosophy of vocational rehabilitation, including history and legislation.

RHAB5433 Medical Aspects of Disability (Sp) Orientation to medical and medically related aspects of vocational rehabilitation with emphasis on the severely disabled.

RHAB5443 Rehabilitation Case Management (Sp) Counseling process in the rehabilitation setting. Focusing upon effective counseling strategies, representative cases, and effective case management methods.

RHAB5453 Psychological Aspects of Disability (Sp) Intensive study of the psychological aspects of adjustment to physical handicap and prolonged handicapping conditions.

RHAB5463 Independent Living and Community Adjustment (Fa) Study of the problems and practices involved in developing independent living rehabilitation programs for people who are disabled physically, developmentally, and mentally.

RHAB5473 Placement of Persons with Disabilities (Su) Focuses on placement theory and practice as they apply to persons who experience disabilities. Special attention is given to the RehabMark approach.

RHAB5483 Rehabilitation Counseling Research (Fa) An indepth examination of rehabilitation research methodology and issues to prepare students to critically evaluate and conduct rehabilitation counseling research in their professional practice.

RHAB5493 Vocational Evaluation and Adjustment (Sp) An indepth examination of theories and techniques related to evaluating vocational potential and work adjustment of people with disabilities.

RHAB568V Rehabilitation Research (Sp, Su) (3-6) Practical experience under the supervision of a faculty member in conducting rehabilitation research in a laboratory or field setting.

RHAB574V Internship (Sp, Su, Fa) (1-9) May be repeated for 18 hours.

RHAB605V Independent Study (Sp, Su, Fa) (1-18) RHAB6203 Disability Policy in the U.S. (Fa) An analysis of public policy approaches to disability in the U.S. Includes the political and philosophical origins of disability policy; reviews major disability legislation and its effects on policy stakeholders; describes recent initiatives; and analyzes evolution of disability policy within context of changing societal, economic, and political conditions.

RHAB6213 Advanced Psychosocial Aspects of Disability (Fa) A theoretical and applied study of techniques that enable people to cope with 2 major life events: disability and unemployment.

RHAB6233 Employment Practices and Interventions (Sp) An intensive study of the employment experiences of workers with disabilities with emphasis on discrimination and barriers to employment and interventions to enable people with disabilities to participate in employment.

RHAB6243 Advanced Rehabilitation Research (Sp) An advanced level course to facilitate the application of scientific validness, research skills, and behavior to the generation of rehabilitation knowledge and problem solving.

RHAB625V Teaching Internship in Rehabilitation (Sp, Su, Fa) (1-18) Graduate teaching experience in the rehabilitation counseling curriculum. Under the supervision of a faculty member, will participate in the development of syllabi, course materials and examinations. Will team teach graduate rehabilitation courses with the faculty member. May be repeated for 18 hours.

RHAB626V Practicum Supervision (Su) (1-6) The study and practice of supervising master's rehabilitation counseling students in a clinical practicum setting.

RHAB6273 Administration & Supervision in Rehabilitation Settings (Odd years, Fa) An examination of the administrative and supervisory functions in rehabilitation settings. Includes administrative theory, issues in human resource management, development, burnout, and exposure to organizational structure and function.

RHAB675V Internship (Sp, Su, Fa) (1-18) Advanced supervised practice in a rehabilitation setting.

RHAB699V Seminar (Sp, Su, Fa) (1-18) Discussion of pertinent topics and issues in the rehabilitation field.

RHAB700V Doctoral Dissertation (Sp, Su, Fa) (1-18) Prerequisite: candidacy.

Rural Sociology (RSOC)

RSOC2603 Rural Sociology (Sp) Meaning of sociological concepts with reference to rural society, interdependence of rural and urban population in ecological areas; institutions; social change and adjustment.

RSOC4603 Environmental Sociology (Sp) The course provides a social perspective on environmental issues. It examines the linkage between society, ecological systems and the physical environment. It provides conceptual frameworks for exploring environmental issues, considers the role of humans in environmental issues, and enhances understanding the complexity of the relationship between societal organization and environmental change.

RUSS1003 Russian Elementary Russian I (Fa) (Same as RUSS 1003)

RUSS1013 Elementary Russian II (Sp) Elementary courses stress correct pronunciation, aural comprehension, and simple speaking ability, with attention to basic grammar and limited reading ability. Prerequisite: RUSS 1003 or equivalent.

RUSS2003 Intermediate Russian I (Fa) Continued intermediate practice in listening to recordings in Russian, with stress on basic grammar and limited reading ability. Prerequisite: RUSS 2003 or equivalent.

RUSS3013 Introduction to Literature (Fa) Prerequisite: RUSS 2003 or equivalent.

RUSS4003 Russian Advanced I (Irregular) Advanced Russian reading, conversation, and composition. Review of grammar and syntax. Prerequisite: RUSS 3013.

RUSS4013 Russian Advanced II (Irregular) Advanced Russian reading, conversation, and composition. Review of grammar and syntax. Prerequisite: RUSS 4003.

RUSS4123 Survey of Russian Literature from Its Beginning to the 1917 Revolution (Fa) The instructor will discuss the historical and cultural backgrounds while focusing on major writers and will deal with literature as an outlet for social criticism. There will be a final examination. It will be taught in English. (Same as WLT 4123)

RUSS4133 Survey of Russian Literature Since Its Beginning to the 1917 Revolution (Fa) The instructor will discuss the historical and cultural backgrounds while focusing on major writers and will deal with literature as an outlet for social criticism. There will be a final examination. It will be taught in English. (Same as WLT 4123)

RSOC4603 Introduction to Community Development (Fa) Introduction to the field of community development; including approaches used in Cooperative Extension Service, vocational agriculture, local governments, and the private sector. Focus is on the community development process. Prerequisite: RUSS 2603 or SOC 213.

RSOC500V Special Problems (Sp, Su, Fa) (1-6) Gives experience in executing research and in analyzing a sociological problem of a community. Prerequisite: graduate standing. May be repeated for 6 hours.

RSOC5163 Agricultural and Rural Development (Su) First offered Summer 2001 Examination of agricultural and rural development issues in less developed countries. Alternative agricultural production systems are compared, development theories are examined, and consideration given to the planning and implementation of development programs. Corequisite: graduate standing and AGEC 1103 (or ECON 2023) (Same as AGEC 4163)

RSOC5463 Research Methodology in the Social Sciences (Odd years, Sp) Logical structure and the method of science. Basic elements of research design; observation, measurement, analytic method, interpretation, verification, and presentation of results. Applications to research in economic or sociological problems of agriculture and Human Environmental Sciences. Prerequisite: graduate standing. (Same as AGEC 5163) Also offered Spring semester (Same as AGEC 5463)RHAB600V Master's Thesis (Sp, Su, Fa) (1-6) Prerequisite: graduate standing.

RSOC700V Doctoral Dissertation (Sp, Su, Fa) (1-9)

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the 1917 Revolution (Odd Years, Sp, Fa) The instructor will discuss the historical and cultural backgrounds while focusing on major writers and will deal with literature as an outlet for social criticism. There will be textual analysis. It will be taught in English with readings in English. (Same as WRLT 4133)

SCWK470V Social Work Research (Sp, Fa) Prerequisite: junior standing. May be repeated for 12 hours. Corequisite: SCWK 4803.

Social Work Practice (Fa) The purpose of this course is the acquisition and demonstration of beginning graduate-level social work practice skills. Students will become familiar with the mission and conceptual framework underlying the School of Social Work, become familiar with and choose an area of emphasis, and develop beginning practice skills. Corequisites: SCWK 4093 and SCWK 5442. Prerequisite: admission into the advanced standing MSW program.

SCWK5013 Culturally Competent Social Work Practice (Su) This course prepares advanced standing MSW students for graduate study. Students will become familiar with the mission and conceptual framework underlying the School of Social Work, become familiar with and choose an area of emphasis, and develop beginning practice skills. Corequisites: SCWK 4093 and SCWK 5442. Prerequisite: admission into the advanced standing MSW program.

SCWK5073 Social Work Research and Technology (Fa) This course includes content necessary for thesis proposal development. A significant component for this course focuses on using research tools to begin the thesis. The course provides an orientation to participatory action research, and to the scientific and systematic evaluation of service delivery and personal professional practice. Corequisites: SCWK 6000L and SCWK 6003. Prerequisite: completion of year one for two-year students or summer advanced standing MSW program.

SCWK5143 Global Social and Economic Justice and Oppression (Fa) The role and responsibilities of the social work profession are examined in an international context. Particular emphasis will be given to workers’ responsibilities to advance global social and economic justice and reduce human oppression through community, social, economic, and organizational development strategies. Corequisites: SCWK 5003 or SCWK 5013.

SCWK5153 Children, Youth, and Family (Sp, Fa) This course focuses on the development, revision, and impact of policy and practice in children, youth, and family systems. Current issues in family practice will be examined. Students will interact with community agencies and utilize class assignments to advocate improvements in current policy and practice. Prerequisite: SCWK 5003 or SCWK 5013.

SCWK5163 Social Work Management, Administration and Supervision (Sp, Su) This course develops advanced skills in management, administration, and supervision in social work organizations. Emphasis is placed on developing leadership skills in ethics, budgeting, finance, resource development, information management, evaluation, staff hiring, supervision and development, and the relationship of policy and practice in children, youth, and family systems. Current issues in family practice will be examined. Students will interact with community agencies and utilize class assignments to advocate improvements in current policy and practice. Prerequisite: SCWK 5003 or SCWK 5013.

SCWK5173 Advanced Practice with Individuals (Sp) The purpose of this course is to provide advanced understanding of the knowledge, skills and values needed to assess and intervene effectively with traditional and non-traditional families and couples. The course will examine social systems and utilize approaches to understand how families and couples function. Students will design interventions. Prerequisite: SCWK 5003 or SCWK 5013.

SCWK5183 Advanced Practice with Individuals (Fa) This course develops advanced skills in social work practice on a micro level. Students learn to analyze and compare practice models. They gain skills in selecting a practice model and integrating multiple models based on client needs. Prerequisite: SCWK 5003 or SCWK 5013.

SCWK5193 Advanced Practice and Policy in Mental Health (Sp) This course focuses on the development, revision, and impact of policy and practice in mental health programs and policies through which mental health programs and policies through which people gain access to mental health services and care. Prerequisite: SCWK 5003 or SCWK 5013.
Health Care (Fa) This course examines the delivery of health care in the United States in the context of social, politi-
cal, economic, and cultural factors. Students gain skills for collaboration on an interdisciplinary team. Prerequisite: SCWK 5003 or SCWK 5013.

SCWK5233 Advanced Technology for Social Work Practice This course advances knowledge of skills and experiences for spiritually-sensitive social work practice. It prepares students to respond competently and critically to diverse spiritual and religious perspectives by using a comparative, critically reflective approach to content. Prerequisite: SCWK 5103 or SCWK 5003 or SCWK 5013.

SCWK5253 Spiritually in Social Work (Sp, Fa) This course provides an advanced framework of knowledge, values, and skills for spiritually-sensitive social work practice. It prepares students to respond competently and critically to diverse spiritual and religious perspectives by using a comparative, critically reflective approach to content. Prerequisite: SCWK 5103 or SCWK 5003 or SCWK 5013.

SCWK5343 Advanced Practice with Groups (Sp, Su) This course provides advanced knowledge, skills, and values needed to assess and intervene effectively with popu-
lations seen in the social work practice of group therapy. This course examines group dynamics, life-stage and strengths perspectives, and client-centered assessment of needs and their application in agency settings. Prerequisite: SCWK 5063 or SCWK 5013.

SCWK5412 Foundation Field Seminar (Sp) A required course for MSW students without an accredited undergraduate degree in social work. This course focuses on the theoretical and practical aspects of the profession, field placement, and professional development. Prerequisite: SCWK 5003 or SCWK 5013.

SCWK5434 Foundation Field Internship (Sp) This course is required of all graduate students entering the MSW program without an accredited undergraduate degree in social work. The purpose of the seminar is to allow students to integrate classroom content with experiences in the field, to learn peer supervision and consultation, and to consult from the experiences of other students in the field. Corequisite: SCWK 6444. Prerequisite: SCWK 5412 or SCWK 5433 or SCWK 5444. (Same as ANTH 3253)

SCWK5442 Field Seminar III (Su) This seminar is required of all graduate students entering the MSW program with advanced standing. Students integrate classroom content with experiences in the field, to learn peer supervision and consultation, and learn from the experiences of other students in the field. Corequisite: SCWK 5444. Prerequisite: admission to graduate program with advanced standing.

SCWK5444 Field Internship III (Su) This course is required of all graduate students entering the MSW program with advanced standing. A minimum of 360 clock hours of agency-based professional social work practicum experience, supervised by a licensed MSW, is required. Corequisite: SCWK 5442. Prerequisite: admission to graduate program with advanced standing.

SCWK5600L Thesis Laboratory (Sp, Su) This laboratory is required for completion of the thesis, which is developed through components of the graduate Research & Technology sequence. Other courses in the graduate cur-
rriculum provide support for the conceptualization and develop-
ment of the thesis. This laboratory is taken in conjunction with SCWK 5073 and SCWK 6073. Corequisite: SCWK 5073 and SCWK 6073.

SCWK6002 Life Course Multi-System Social Work I (Fa) In this course students learn to develop a two-sector sequence, students select a community problem, provide services to clients, and address the problem through policy analysis, ethical and legal factors, advocacy, research training, training, paradigm analysis, development of a practice model, and implementation of micro and mezzo interventions in the field are examined. Corequisite: SCWK 6444, SCWK 6442, and SCWK 5073. Prerequisite: completion of year one for two-year students, or summer semester for advanced standing students.

SCWK6013 Life Course Multi-System Social Work II (Fa) This is a two-semester sequence. Students provide services to social work clients. This course covers application of life course theory and multi-system and diversity perspectives. Issues across the life course are con-
sidered, including gender, race, ethnicity, class, and other factors. Students learn skills and techniques through program develop-
ment, a grant proposal submission, and implementation of macro interventions. Corequisite: SCWK 6073, SCWK 6454, and SCWK 6452. Prerequisite: SCWK 6003.

SCWK6073 Social Work Research and Technology III (Sp) In this final research course, students collect and analyze data as planned in the thesis proposal submitted for Research and Technology II. Course content focuses on the advanced research skills necessary to complete the thesis. Students write a research report of their findings and submit it for publication. Corequisite: SCWK 6103 and SCWK 6103I.

SCWK6442 Advanced Field Seminar I (Fa) The first of two advanced field seminars required of all students in the MSW program. The purpose of the seminar is to allow students to integrate classroom content with experiences in the field, to practice peer supervision and consultation, and to learn from the experiences of other students in the field. Corequisite: SCWK 6444. Prerequisite: SCWK 5412 or SCWK 5433 or SCWK 5444.

SCWK6444 Advanced Field Internship I (Fa) This is the first of two advanced field internships required of all graduate students in the MSW program. A minimum of 330 clock hours of agency-based professional social work practicum experience, supervised by a licensed MSW, is required. Corequisite: SCWK 6442. Prerequisite: SCWK 5412 or SCWK 5433 or SCWK 5444.

SCWK6452 Advanced Field Seminar II (Sp) This is the second of two advanced field seminars required of all students in the MSW program. The purpose of the seminar is to allow students to integrate classroom content with experiences in the field, to practice peer supervision and consultation, and to learn from the experiences of other students in the field. Corequisite: SCWK 6444. Prerequisite: SCWK 5412 or SCWK 5433 or SCWK 5444.

SCWK6454 Advanced Field Internship II (Sp) This is the second of two advanced Field internships required of all graduate students in the MSW program. A minimum of 330 clock hours of agency-based professional social work practicum experience, supervised by a licensed MSW, is required. Corequisite: SCWK 6452. Prerequisite: SCWK 6442.

Secondary Education (SEED)

SEED4223 Teaching of Mathematics (Sp, Su, Fa) (Same as SEED 4223)

SEED550V Workshop (Irregular) (1-18) May be repeated for 18 hours.

SEED599V Seminar (Irregular) (1-18) May be repeated for 18 hours.

SEED600V Master's Thesis (Irregular) (1-6) May be repeated for 18 hours.

SEED605V Independent Study (Sp, Su, Fa) (1-18) May be repeated for 18 hours.

SEED660V Workshop (Irregular) (1-18) Prerequisite: advanced graduate standing.

SEED674V Internship (Irregular) (1-6) Prerequisite: advanced graduate standing.

SEED6800 Educational Specialist Project (Irregular) (1-18)

Sociology (SOCI)

SOCI2033H Honors General Sociology (Sp, Su, Fa) Group relations, culture, personality, social institutions, collective behavior, and social change. (Same as SOCI 2033H 2013)

SOCI2013 General Sociology (Sp, Su, Fa) Group relations, culture, personality, social institutions, collective behavior, and social change. (Same as SOCI 2013)

SOCI2013E General Sociology (Sp, Su, Fa) Group relations, culture, personality, social institutions, collective behavior, and social change. (Same as SOCI 2013E 2013)

SOCI2103 Social Problems (Sp, Su, Fa) Social dis-
organization, social strains, and deviant behavior, including consideration of war, poverty, ethnic relatio-
s, delinquency, drug addiction, mental illness, and population problems. Prerequisite: SOCI 2013. (Same as SOCI 2013E 2013)

SOCI2033 Social Problems (Sp, Su, Fa) Social dis-
organization, social strains, and deviant behavior, including consideration of war, poverty, ethnic relatio-
s, delinquency, drug addiction, mental illness, and population problems. Prerequisite: SOCI 2013. (Same as SOCI 2013E 2013)

SOCI2033T Sociology Transfer Course (Sp, Su, Fa) An introduction to descriptive and inferential statistics with spe-
cial emphasis on those techniques most commonly used in social research. Corequisite: SOCI 2033. Prerequisite: SOCI 2013. (Same as STAT 3053)

SOCI3313 Social Research (Sp, Fa) Study and expe-
rience in current methods of social research with emphasis on analytical methods, hypothesis testing, and the interpretation of statistical data.

SOCI3333 Anthropology of Ethnicity (Sp) Anthropological approaches to the study of race and ethnic-
ity, with reference to race and ethnicity in non-western societies, and the role of race and ethnicity in the social construction of identity.

SOCI3372 Deviant Behavior (Fa) Deviance, theore-
tical, empirical, and policy responses, and treatment programs for behaviors such as vagrancy, alcoholism, violence, and sexual deviancy which deviate from social norms. (Same as SOCI 3372)

SOCI3923H Honors Colloquium (Irregular) Covers a special topic or issue, offered as part of the honors pro-
gram. Prerequisite: honors candidacy (not restricted to candi-
dates in sociology). May be repeated for 9 hours.

SOCI399VH Honors Course (Sp, Fa) (1-6) Prerequisite: junior standing. May be repeated for 12 hours.

SOCI4001 Proseminar in Sociology (Irregular) Forum for students and faculty to present and discuss

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SOCI4003 Internship in Sociology (Sp, Su, Fa) (Formerly: Sociology 4003) Field experience in municipal, county, or state agencies, or any other agency which is approved by the instructor. Prerequisite: SOCI 2013.

SOCI401V Special Topics in Sociology (Sp) (1-6)
Designated topics not usually presented in depth in regular courses. Prerequisite: SOCI 2013. May be repeated for 6 hours.

SOCI4023 Social Theory (Fa) Nineteenth and 20th century sociological theories. Prerequisite: Consent of instructor. May be repeated for credit.

SOCI403V Individual Study in Sociology (Sp, Su, Fa) (1-3) A reading and conference course on special topics in sociology for advanced students.

SOCI4043 Seminar in Sociology (Sp) Prerequisite: senior standing.

SOCI4063 Organizations in Society (Fa) An introduction to the study of organizations; provides a broad overview of issues and problems related to organizations in society. Prerequisite: SOCI 2013.

SOCI4073 Peoples of East Africa (Fa) The major institutional structures, dynamics and problems of the Africans, Asians, and Europeans of contemporary Uganda, Kenya, Tanzania, Somalia, Sudan, and Ethiopia. Prerequisite: SOCI 2013.

SOCI4123 Black Ghetto (Sp, Fa) The origin, continuity, problems, and personalities of the Black American community. Additional orientations to national and international life. Prerequisite: SOCI 2013. (Same as SOCI 4123)

SOCI4133 Sociology Transfer Course (Fa) An introduction to the sociological analysis of the interactions and relationships which constitute the family as a group and as an institution, to include issues of gender and family diversity. Prerequisite: SOCI 2013 or SOCI 2033.

SOCI4163 Extremism (Sp) Descriptions of, explanations for, religious cults and terrorist political groups in America, including question(s) of appropriate response to them. Prerequisite: junior standing.

SOCI4213 Seminar in Violence (Irregular) Explains the causes of, and possible responses to individual, collective, and institutional violence; comparisons between socially acceptable and unacceptable forms of violence. Prerequisite: junior standing.

SOCI4313 Language and Society of Japan (Fa) The primary objective of this course is to investigate the way the Japanese language reflects the beliefs and customs of the Japanese people as a social group. For comparison purposes, this course makes reference to studies in American language and culture. Proficiency in Japanese not required. Prerequisite: junior standing. (Same as ASIT 4313, COMM 4313)

SOCI4603 Environmental Sociology (Sp) The course provides a social perspective on environmental issues. It examines the linkage between society, ecological systems, and the environment. It provides conceptual framework(s) for analyzing environmental issues, considers the role of humans in environmental issues, and enhances understanding the complexity of the relationship between societal organization and environmental change. (Same as RSQ 4603)

SOCI500V Advanced Problems in Sociology (Sp, Su, Fa) (1-6) Individual research on problems or problem areas. Prerequisite: graduate standing.

SOCI5013 Advanced Social Research (Fa) Supervised field experience and other projects in social research. Prerequisite: SOCI 2013 and SOCI 3301, and SOCI 3303 and SOCI 3301L.

SOCI5023 Sociology of Education (Irregular) Sociological theory and research relevant to education, the school as a social system, professionalization and career patterns in teaching, social conflicts, social stratification, role relationships, and other factors. Prerequisite: graduate standing.

SOCI503V Special Topics (Irregular) (1-6) Designated topics not usually presented in depth in regular courses. May be repeated for 6 hours. Prerequisite: Graduate Standing. May be repeated for 6 hours.

SOCI5053 Advanced General Sociology (Irregular) Advanced survey of the discipline and profession of sociology, including designation of the subject matter of sociology and relation to other disciplines, models of society and people, social units and social processes, methods, and sociology as a profession. Prerequisite: graduate standing.

SOCI5073 The Sociology of Law (Irregular) Sociological analysis of the role of law in American society, the creation of law, and the effects of law. Prerequisite: graduate standing.

SOCI5083 Methods of Field Research (Sp) An introduction to research strategies including intensive interviewing, participant observational fieldwork, content analysis, historical analysis, and comparative research. Emphasis on the practical aspects of designing and executive research involving multiple methods of data gathering and analysis. Prerequisite: graduate standing.

SOCI5113 Seminar in Social Inequality (Fa) Major theories of stratification systems, comparisons of modern and traditional systems; emergent trends. Prerequisite: SOCI 4023 or SOCI 5003.

SOCI5133 The Community (Even years, Fa) A sociological analysis of the theory, methods and materials used in the study of the community. Prerequisite: graduate standing.

SOCI5153 Sociological Perspective on Social Psychology (Sp) Principles, concepts, and methods used in analyzing effects of social structures and processes on the self and interaction. Topics include exchange theory, role analysis, symbolic interactionism, social construction of reality, socialization, social perception, social control, and research methods. Prerequisite: graduate standing.

SOCI5213 Social Evaluation (Irregular) Examination of the methods and techniques of social evaluation at the federal, state and local level, including topics in evaluation strategies, designs, problems encountered in field, and utilization of evaluation results, with special attention to the relationship between theory and evaluation. Particular emphasis will be placed on the role of the evaluator and utilization of evaluation results in policy formulation. Prerequisite: SOCI 5013.

SOCI5233 Research Design and Evaluation (Irregular) A survey of major theories, social, developmental, ecocultural, functionalist, conflict, subcultural, control, and phenomenological-explaining morally condemned differences in society. Particular emphasis is on practical implications of each perspective for policy and social control. Prerequisite: graduate standing.

SOCI5253 Classical Social Theory (Fa) A survey of social theory up to the late 20th century. An introduction to the classical sociological themes that continue to inform research, analysis, and policy formation. Major issues will include the relationship between the individual and the community, and the sources of stability, conflict, and change. Prerequisite: graduate standing.

SOCI5263 Contemporary Social Theory (Sp) Analysis of contemporary social theories & major theoretical debates. Emphasis is on critical evaluation & application of theoretical perspectives to current social issues affecting families and communities. Prerequisite: SOCI 5253.

SOCI5311L Applied Data Analysis Laboratory (Sp) Provides instruction for data transformations required for the advanced statistical procedures used in the Statistical Package for the Social Sciences (SPSS). Also provides instruction in the use of advanced statistical procedures covered in SOCI 5313. Corequisite: SOCI 5313.

SOCI5313 Applied Data Analysis (Sp) Covers basic concepts and applications of the general linear model to a variety of sociological research issues and problems. Also provides an introduction to binary dependent and multivariate categorical data analysis for sociological research. Prerequisite: SOCI 3303 or an equivalent course in statistics. Familiarity with computer statistical programs is assumed. Prerequisite: SOCI 3303.

SOCI5303 Survey Research (Irregular) Introduction to techniques of social survey research. Focuses on the development of survey research instruments and their construction. Measurement techniques are examined including issues of reliability and validity, scales, and scale construction. Elementary sampling considerations are discussed in the applied context of research. Techniques of file generation and manipulation relative to survey research are examined. Prerequisite: SOCI 3303.

SOCI5503 Research Internship (Sp, Fa) Supervised research experience in field setting. Prerequisite: graduate standing.

SOCI600V Master’s Thesis (Sp, Su, Fa) (1-6) Special topics in Sociology (Irregular) The study of the impact of public policy on children and families, and the ways in which policies are created, modified, and changed. Includes the history of public policy concerning children and families.

Space and Planetary Sciences (SPAC)

SPAC500V Graduate Research (Irregular) (1-10)
Prerequisite: Graduate standing.

SPAC5033 Planetary Systems (Odd Years, Fa)
The nature of the solid solar system and other planetary systems from observation and theoretical modelling. Prerequisite: graduate standing.

SPAC511L Space and Planetary Lab (Irregular) Laboratory course in space and planetary sciences consisting of experiments in the five major areas of space and planetary sciences: planetary astronomy, planetary geology, planetary atmospheres, origin and evolution of life and orbital mechanics and astrophysics. Intended for students enrolled in the graduate programs in space and planetary sciences.

SPAC5123 Internship (Irregular) Internship for graduate students in the space and planetary sciences graduate degree programs and concentrations in the graduate programs in physics, biology, geosciences and mechanical engineering to conduct a phase of their research, normally for one month, at a national or international laboratory in North America or overseas.

SPAC5132 Ethics Workshop (Irregular) A two-week workshop exploring the ethical issues of conducting research in the space and planetary sciences. Through a study of case histories, the course will explore both issues of academic and research honesty, such as the fabrication of data, and the ethics surrounding the execution of research, such as issues surrounding planetary protection. Summer only.

SPAC5142 Communications Workshop (Irregular) A two-week workshop concerning the ways in which scientists communicate the results of their research to the general public. The course is taught by prominent journalists in the space and planetary sciences and puts an emphasis on original writing and critique. The workshop is not considered satisfactorily completed until each student has an article published in a university or higher-circulation publication. Summer only.

SPAC5152 Entrepreneurship Workshop in Space and Planetary Sciences (Irregular) A two-week workshop addressing the ways in which technology generated during scientific and engineering research is transferred to the private sector and used for wealth generation. Summer only.

SPAC5161 Seminar (Irregular) Seminars organized by the Arkansas-Oklahoma Center for Space and Planetary Sciences covering topics on the cutting edge of research in the field for graduate students. Seminar topics change each year and one faculty member in the space and planetary sciences as part of their graduate degree programs or concentrations in the graduate programs in physics, biology, geology, geography and mechanical engineering.

SPAC5313 Planetary Atmospheres (IR) Origins of planetary atmospheres, structures of atmospheres, climate evolution, dynamics of atmospheres, levels in the atmosphere, the upper atmosphere, escape of atmospheres, and comparative planetology of atmospheres. (Same as CHEG 5313)

SPAC5413 Planetary Geology (Irregular) Exploration of the solar system, geology and stratigraphy, meteorite impacts, planetary surfaces, planetary crusts, basaltic volcanism, planetary interiors, chemical composition of the planets, origin and evolution of the Moon and planets.

SPAC5513 Abiotic Synthesis of Extraterrestrial Life (Irregular) Abiotic synthesis of biomolecules on Earth, the origin of cells; genetic information, origin of life on Earth and elsewhere, evolution and diversity, ecological niches, bacteria, archea, and eukaryotic, novel metabolic activity of microorganisms; the possibility of life on planets around other stars, and the possibility of life on planets around other stars. Prerequisite:
SPAN 3113. Includes a review of the essentials of Spanish grammar. Intensive practice to strengthen written and oral expression. Prerequisite: SPAN 1013 or equivalent. (Same as SPAN 2003I)

SPAN 1013 Intermediate Spanish II (Sp, Fa) Basic grammar and limited reading ability. Prerequisite: SPAN 1003. (Same as SPAN 2013I)

SPAN2013H Honors Intermediate Spanish II (Sp, Fa) Continued development of basic Spanish speaking and writing skills and intensive development of reading skills. Prerequisite: SPAN 2003 or equivalent. (Same as SPAN 2013H, 2013I)

SPAN3013 Intermediate Spanish II (Sp, Fa) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: SPAN 3003 or equivalent. (Same as SPAN 2013H, 2013I)

SPAN2016 Intermediate Spanish (Sp) Equivalent to 2003 and 2013. Stresses aural comprehension and practical speaking ability. Reading, writing, and grammar in support of communication skills.

SPAN2003T Spanish Transfer Course SPAN2003 Intermediate Spanish I (Sp, Fa) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: SPAN 1013 or equivalent. (Same as SPAN 2003I)

SPAN4243 Business Spanish I (Sp) Enhances ability to relate to Spanish-speaking business environments by providing a solid foundation in vocabulary and discourse related to functional business areas such as organization of a company structure, management, banking and accounting, capital investment, personnel and office systems, production of goods and services, marketing, finance, and import-export. Prerequisite: SPAN 3003.

SPAN 3113. Latin American Cinema and Society (Irregular) This course examines key issues in Latin American cinema through films, documentaries, and literary and cultural texts. Topics included are: Human Rights, Ethnicity,Gender, Revisions of the past. Prerequisite: SPAN 3113.

SPAN4333 Business Spanish I (Sp) Enhances ability to relate to Spanish-speaking business environments by providing a solid foundation in vocabulary and discourse related to functional business areas such as organization of a company structure, management, banking and accounting, capital investment, personnel and office systems, production of goods and services, marketing, finance, and import-export. Prerequisite: SPAN 3003.

SPAN470V Special Topics (Irregular) May be repeated for 6 hours.

SPAN570V Special Investigations (Irregular) (1-6) May be repeated for 6 hours.

SPAN 4113. Survey of Spanish-American Literature (Sp) Critical review of the literature of Spain from the Generation of 1898 to the present day. Prerequisite: SPAN 3113.

SPAN 4233 Modern Mexico: Culture & Society (Sp, Su, Fa) A wide-ranging exploration of culture and society in Mexico today, its historical roots and movements in the 20th century against the processes of modernization and globalization. Includes an historical survey, but focuses on contemporary issues, such as relations with U.S. This course will be taught in Spanish. Prerequisite: SPAN 3113. (Same as SPAN 4233I)

SPAN 4243 Language and the Hispanic United States (Sp, Su, Fa) An exploration of the history and culture, art and politics of the major Hispanic groups in the United States. Focus on contemporary attitudes and issues. Prerequisite: SPAN 3113.

SPAN 4323 Latin American Cinema and Society (Irregular) This course examines key issues in Latin American cinema through films, documentaries, and literary and cultural texts. Topics included are: Human Rights, Ethnicity, Gender, Revisions of the past. Prerequisite: SPAN 3113.

SPAN 4433 Business Spanish I (Sp) Enhances ability to relate to Spanish-speaking business environments by providing a solid foundation in vocabulary and discourse related to functional business areas such as organization of a company structure, management, banking and accounting, capital investment, personnel and office systems, production of goods and services, marketing, finance, and import-export. Prerequisite: SPAN 3003.

SPAN 470V Special Topics (Irregular) May be repeated for 6 hours.

SPAN 570V Special Investigations (Irregular) (1-6) May be repeated for 6 hours.

SPAN 5233 Golden Age Novel (Irregular) Major works of Spanish prose fiction from the 16th and 17th centuries, with close reading of major works.

SPAN 5243 Golden Age Poetry and Drama (Irregular) An intensive study of the history, culture and literature of colonial Spain from 1492 until 1810. The course will consider representative colonial and indigenous texts and their contexts including Renaissance, Baroque, and travel literature of the eighteenth century. The course will be taught in Spanish.

SPAN 5273 Nineteenth Century Survey (Irregular) From Neoclassicism through Naturalism.

STAT 2023 Biostatistics (Sp) An introduction to biostatistics emphasizing methods for collecting, graphing, and interpreting data. Special emphasis is placed upon available methods for both exploratory and confirmatory data analysis. Prerequisite: STAT 2023. Corequisite: Lab component.

STAT 3013 Introduction to Probability and Statistics (Sp, Fa) A calculus-based introduction to the foundations of probability and statistics. Emphasis is placed upon understanding elementary properties of probabilities, events, statistical densities and distributions, properties of random variables, law of large numbers, and their relationship to sampling and statistical inference. Prerequisite: MATH 2564.

STAT 4011L Statistics Methods Laboratory (Sp, Fa) Emphasis on use of integrated statistical packages to complement statistical methodology. Prerequisite: STAT 4003. Corequisite: STAT 4003.

STAT 4003 Statistical Methods (Sp, Fa) Concepts of probability, sampling, regression, and experimental design. Corequisite: STAT 4001L.
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(Te, Su, Fa) Chi square tests. Kolmogorov-Smirnov goodness-of-fit tests, the Mann-Whitney and Wilcoxon 2-sample tests, tests for independence and association, measures of association. Prerequisite: MATH 1203 and junior standing.

STAT4043 Sampling Techniques (Sp, Su, Fa) Considers optimum techniques of simple random, stratified random, and systematic sampling from finite populations subject to cost precision constraints. Wide range of application. Prerequisite: STAT 4003.

STAT4373 Experimental Design (Sp) Topics in the design and analysis of planned experiments, including randomized block, Latin square, split plot, and BB designs, use of fractional factorial replication, and repeated measures. Prerequisite: STAT 4003.

STAT5103 Theory of Statistics (Fa) Fundamentals of probability, distribution theory, and random variables; expected value, moments, and generating functions; classic parametric families of distributions; central limit theorems, inequalities, and laws of large numbers. Prerequisite: MATH 2574.

STAT5113 Statistical Inference (Sp) Statistical theory of estimation and testing hypothesis. Prerequisite: STAT 5103.

STAT5313 Regression Analysis I (Sp) Matrix formulation of linear models of two or more regression. Estimability and use of the generalized inverse in analysis of variance and two-factor models of less than full rank. Prerequisite: MATH 2574.

STAT5322 Statistical Packages (Sp, Fa) Emphasis on use of computer to perform statistical data analysis through the use of statistical packages. Includes use of the SAS, SPSS, and BMD packages. Data management operations as well as formal normative procedures such as ANOVA and regression are considered. Prerequisite: STAT 5103.

STAT5333 Analysis of Categorical Responses (Sp) A modern treatment, including extensions of classical probit analysis, multivariate logistic models, GSK model, log-linear models in analysis of multiway contingency tables, and nonmetric multidimensional scaling. Prerequisite: STAT 5313.


STAT5353 Methods of Multivariate Analysis II (Sp) Hotelling’s T2 procedures, multivariate analysis of variance, discriminant function analysis and problems of classification, multivariate scaling, and cluster analysis. Prerequisite: STAT 5313.

STAT5383 Time Series Analysis (Sp, Su, Fa) Identification, estimation and forecasting of time series. Prerequisite: STAT 5313.

STAT610V Research in Statistics (Irregular) (1-4) Prerequisite: graduate standing.

STAT639V Topics in Statistics (Irregular) (1-3) Current state of the art on methodology in one of the topics: multivariate analysis, time series analysis, sequential analysis, survey analysis, or biostatistics. May be repeated for 99 hours.

Technology Education (TEED)

TEED1103 The Nature of Technology (Sp) Foundational study of the close relationship between nature, emerging technologies, and technological literacy throughout history. May be repeated.

TEED1201L Drafting Technology I Laboratory (Sp, Su, Fa) Laboratory exercises in principles and practices of drafting technology I. Corequisite: TEED 1201L. (Same as ITED 1203)

TEED1203 Drafting Technology I (Fa) Use and care of instruments; lettering, sketching, applied geometry, pictorial drawing, and orthographic projection. Introduction to computer-aided drafting. Corequisite: TEED 1201L. (Same as ITED 1203)

TEED1301L Construction Methods and Materials Laboratory (Sp, Fa, Su) Laboratory exercises in principles and practices of construction methods and materials. Corequisite: TEED 1303.

TEED1301 Construction Methods and Materials (Sp, Su, Fa) Primary objective is to acquaint the student with various types of construction materials and their application. Corequisite: TEED 1301L.

TEED1413 Principles of Electricity (Sp, Su, Fa) Surveying and interpreting the origin, principles, and operation of electricity and its relation to other educational programs. Prerequisite: TEED 14103.

TEED1503 Introduction to Technology Education (Sp, Su, Fa) Surveying and interpreting the origin, principles, and operation of education and its relation to other educational programs. Prerequisite: TEED 14103.

TEED1603 Industrial Safety (Irregular) Study of accidents, the cost of accidents, appraising safety performance, safety inspection, planning, and maintaining a safe environment, and organization and operation of school laboratories and industrial accident prevention programs. (Same as ITED 1603)

TEED2103 Technology and Society (Fa) An examination of the complex relationships between society, values, and technological development in developed and underdeveloped nations. May be repeated.

TEED2213 Technological Design (Irregular) Principles of technological design; a study of the theoretical and present role of design on the creation and continuation of human products and systems. (Same as ITED 2213)

TEED2313 Fundamentals of Production (Irregular) Instruction and practice in the development, teaching, and assessment of curriculum related to the technological fields of construction and manufacturing.

TEED2423 Maintenance (Irregular) The principles and practices used in installing, maintaining, troubleshooting, diagnosing, and repairing technological equipment and materials found in a modern technological environment. Prerequisite: TEED 2103.

TEED2613 Manufacturing Technology (Irregular) Fundamentals of manufacturing technology, including common manufacturing processes, finishing, shaping, processing, packaging, and shipping techniques. May be repeated on emphasis on techniques for teaching these technological systems.

TEED3103 Technology Research, Experimentation, and Trouble-shooting (Irregular) Fundamentals of concepts of engineering design, including analysis and use of technology problem solving tools of research, experimentation and trouble-shooting. Prerequisite: TEED 1103. May be repeated.


TEED3223 Advanced Drafting Technology (Irregular) Emphasis on advanced methods of computer aided drafting and design. Includes section views, threaded fasteners, and dimensioning working drawings and assemblies with rendering of plans and specifications of traditional and contemporary design.

TEED3303 Energy, Power and Transportation Technology (Irregular) Concepts, foundations and mathematics for teaching energy, power, and transportation technologies at the secondary level. Prerequisites: TEED 1103 and TEED 2103. May be repeated.

TEED3323 Construction Technologies (Irregular) Fundamentals of construction technology with an emphasis on the tools, techniques and practices used in the technical area. Additional concentration on appropriate techniques for teaching construction technology.

TEED3433 Electricity & Electronics Technology (Irregular) Fundamentals of the electricity and electronics technical areas. Particular emphasis placed on using technologies from the industry (PLCs, relays, control systems, switching devices, etc.) to teach technology education.

TEED3513 Elementary Technology Education (Irregular) An examination of the applications of technology education focusing on the development and introduction of technology and engineering-based activity in the elementary and middle-levels.

TEED3633 Plastics Technology (Irregular) Tools, materials, and processes involved in the use and fabrication of plastics relating to modern plastic industries.

TEED4103 Engineering Design for Technology Education Capstone course. Analysis of engineering design, focus on design processes, physical and computer modeling, and materials processing. Prerequisites: TEED 1103 and TEED 3103. May be repeated.

TEED4523 Advanced Technology Education (Irregular) Provides the student with the expertise to develop and update a typical technology education program in order to keep the program current with changes in state and national trends in the discipline.

TEED459V Industrial Internship (Sp, Su, Fa) (1-12) In an actual industrial setting, the student will study technological functions, organizational structures, design, production, fabrication, routing, quality control, work schedules, industrial relations, and related activities of American industrial society. May be repeated for 15 hours.

Transportation & Logistics (TLOG)

TLOG3443 Principles of Transportation (Fa) Emphasis on the historical development of transportation and logistics functions in the firm including physical supply and distribution activities such as transportation, storage facility location, inventory control, materials handling, warehousing, and organization. Prerequisite: ECON 2013 and ECON 2023 or ECON 2143.

TLOG3613 Business Logistics (Fa) Management of logistics functions in the firm including physical supply and distribution activities such as transportation, storage facility location, inventory control, materials handling, warehousing, and organization. Prerequisite: ECON 2013 and ECON 2023 or ECON 2143.

TLOG3823 Purchasing and Inventory Systems (Fa) Management of the purchasing function, including organization, procedures, supplier selection and development, quality control, price determination, global sourcing, and methods of inventory control. Prerequisite: STAT 5103 and STAT 5313.

TLOG410V Special Topics in Logistics (Irregular) (1-3) Explores current events, concepts, and new developments in the field of logistics and transportation. Topics are selected by the Marketing and Transportation faculty for each semester the course is offered. Prerequisite: TLOG 3613. May be repeated for 6 hours.

TLOG4633 Transportation Carrier Management (Fa) Reviews special management techniques and analytical framework available for solving problems associated with transportation companies. Prerequisite: TLOG 3443.

TLOG4643 International Transportation and Logistics (Sp) Logistics decisions with special emphasis on transportation, global sourcing, customs issues, governmental influence, facility location in global environment, and import-export opportunities. Special emphasis is placed on current events and their effect on the marketing and logistics activities of U.S.-based organizations. Pre- or Corequisite: TLOG 3443. Prerequisite: TLOG 3613.

TLOG4653 Transportation and Logistics Strategy (Sp) Design and management of transportation and logistics systems for firms of varying size and different supply and demand environments. This capstone course relies heavily on computer assisted cases and lectures from visiting transportation and logistics executives. Prerequisite: TLOG 3443 and TLOG 3613.

TLOG4854 Independent Study in Transportation and Logistics (Sp, Su, Fa) (1-3) Permits students to explore selected topics in transportation/logistics. Prerequisite: TLOG 3613.

TLOG560V Special Topics in Logistics (Irregular) Explores current events, concepts, and new developments in the field of logistics and transportation. Topics are selected by the Marketing and Transportation faculty for each semester the course is offered. May be repeated for 3 hours.

TLOG5633 Retail and Consumer Products Supply Chain Management (Sp) Supply chain management is the integration of key business processes from end user through suppliers. The focus of this course is on the core processes that must be linked throughout the supply chain with an emphasis on logistics processes. Foundational topics in logistics and supply chain management will be covered.

TLOG5653 Transportation Strategies in the Supply Chain (Fa) This course focuses on the setting of objectives and the design of optimal transportation strategy and alternative means of implementing transportation strategies in a multi-modal environment.

TLOG5653 Global Logistics and Supply Management (Sp) This course examines the planning and management of logistics, but emphasizes supplier selection and development, logistics information systems, and performance measurement. Emphasis is placed on the integration of purchasing, materials management, and multi-firm logistics planning. International logistics is also a focus of this course. Prerequisite: TLOG 5653.

TLOG5663 Supply Chain Management (Fa) This course examines the planning and management of supply
examines career exploration strategies using commonly accepted theory in career development. The focus is on decision-making competency, and assessing personal characteristics, exploring academic majors, researching occupations and creating a career plan.

VAED605V Independent Study (Irregular) (1-18) Prerequisite: VOED 392V.

VAED6133 Instructional Management in Vocational and Adult Education (Sp, Su, Fa) An analysis of designing and managing vocational and adult instructional programs with competency development in directing curriculum development, improving instruction, formulating schedules, and initiating competency-based education.

VAED6143 Student Services in Vocational and Adult Education (Sp, Su, Fa) A comprehensive course which includes managing student recruitment and admissions, providing systematic counseling and guidance services, maintaining overall school discipline, establishing a student placement service, and coordinating follow-up studies.

VAED61313 Curriculum Development in Vocational and Adult Education (Sp, Su, Fa) Emphasis is given to understanding the theoretical foundation upon which the programming process is predicated, developing a theoretical model, and acquiring the conceptual tools necessary to design and implement a programming process in any vocational or adult education organization.

VAED6403 Special Topics in Human Resource Development (Sp, Su, Fa) Designed for persons interested in exploring topics specific to vocational and adult education and human resource development in business and industry settings. Emphasis given to examining vocational and adult education research as applied in the public and private sector.

VAED6443 Program Evaluation in Human Resource Development (Even years, Sp) This course is a doctrinal level course designed as an introduction to program evaluation in human resource development, training, and other HRD interventions. Emphasis is on (a) systems thinking applied to evaluation, (b) organizational development and program improvement, and (c) the integration of evaluation with strategic planning and performance improvement.

VAED6453 Training in the Workplace (Sp, Su, Fa) An introduction to and survey of current theories and practices in training and development. Students are expected to explore selected interdisciplinary topics in areas such as adult education, vocational education, human resource development, organizational behavior, instructional technology, and economic factors that relate to training in the workplace.

VAED674V Internship (Irregular) (1-18) Prerequisite: advanced graduate standing.

VAED680V Educational Specialist Project (Irregular) (1-16) An original project, research paper, or report required of all Ed.S. degree candidates. Prerequisite: admission into E.D.S. program.

VAED692V Directed Field Experience (Irregular) (1-18) Prerequisite: completion of 12 credit hours of VOED 390 and employee inservice-vocational-technical education field based instructor. May be repeated for 24 hours.

VAED699V Seminar (Irregular) (1-18) May be repeated for 18 hours.

VAED1003 Self-Directed Learning Seminar (Sp, Fa) This course is designed to take students beyond orien-
tation into the realm of taking responsibility for their academic decisions and learning. The focus is on the whole college experience.

VAED1011 Career Exploration (SP) This course

VOED200V Work Experience I (Sp, Su, Fa) (1-6) Method of securing a position and making a beginning, communication skills, job skills, and related information for the specific vocation.

VOED201V Work Experience II (Sp, Su, Fa) (1-6) Personality factors, safety judgments, vocabulary for the occupation, job skills, and related information for advanced jobs in a specific vocation.

VOED203V Work Experience IV (Sp, Su) (1-6) Advanced mathematical skills, communication skills for a specific vocation, evaluation in business and industry, job skills, and related information at the journeyman level.

VOED204V Work Experience V (Sp, Su) (1-6) Human relations, economies of business and industry, public relations, job skills, and related information at the supervisory level.

VOED3001 Orientation to VOED (Sp, Su, Fa) Study of the status of vocational education in public and private schools of our nation with an emphasis on Arkansas schools. Major emphasis is placed on vocational education in secondary schools and 1- and 2-year undergraduate-level students with a major in vocational education. Postsecondary schools are excluded. Required for all VOED3112 Vocational Student Organizations (Fa) Survey of student organizations from all vocational service areas including purposes of the organizations, methods of integrating the organization into classroom activities, and effective advice.

VOED380V Supervised Work Experience (Sp, Su, Fa) (1-9) Supervision in business and industry under guidance. Designed for students who desire or need directed supervised work experience. May be repeated for 6 hours.

VOED390V Performance Based Teacher Education (Sp, Su, Fa) (3-12) Development of competencies related to the methodology of instructional planning, execution, and evaluation. Provided by PBTE modules and University resource person. Enrollment before VOED 391V and 392V. Prerequisite: employed in service vocational-technical education field based instructor. May be repeated for 24 hours.

VOED392V Performance Based Teacher Education (Sp, Su, Fa) (3-12) Development of competencies related to vocational guidance, contemporary instructional techniques, and student vocational organizations. Provided by PBTE modules and University resource person. Prerequisite: completion of 12 credit hours of VOED 390 and employee inservice-vocational-technical education field based instructor. May be repeated for 24 hours.

VOED393V Performance Based Internship (Sp, Su, Fa) (3-6) In an actual school setting the student will satisfactorily demonstrate the competencies required to conduct a total vocational-technical education program. Instruction and follow-up will be provided by a University resource person. Prerequisite: completion of 12 credit hours of VOED 392 and employee inservice-vocational-technical education field based instructor. May be repeated for 24 hours.

VOED4003 Introduction to Professionalism (Sp, Su, Fa) Studying and developing professional concepts in vocational education with accepted principles of professionalism applied to vocational education settings.

VOED4013 Teaching Strategies (Fa) Methods and techniques in the preparation and delivery of teaching.

VOED4023 Classroom Management (Fa) Theory and techniques in classroom management, including professional ethics and school policies related to students, faculty and programs.

VOED4033 Assessment / Program Evaluation (Fa) An introduction to constructing, evaluating and interpreting tests; descriptive and inferential statistics; state competency testing; and guidelines for state program evaluations. May be repeated.

VOED4041 Lab Management in Vocational Education (Sp) Selection, design and evaluation of laboratory experiences in business education, family and consumer sciences and technology education. Co-requisite: VOED 406V. May be repeated.

VOED4051 Seminar Teaching Internship (Sp) Site-based field experiences are integrated with the course content to provide continuity between theory and practice.
VOED2003 Classroom Management, ethics and diversity are emphasized. Conquisite: VOED 406V. May be repeated.

VOED400V Teaching Internship (Sp, Su) A minimum of 15 weeks will be spent in an off-campus school, at which time the student will have an opportunity under supervision to observe, to teach and to participate in other activities involving the school and the community. Prerequisite: Senior status, VOED 4003, VOED 4013, VOED 4023, VOED 4033, CIED 3023 and CIED 3033.

VOED4101 Understanding Student Affairs (Fa) This course provides an opportunity to gain knowledge in the theory and practical application of student affairs. An emphasis is placed on leadership development, problem solving, and career exploration in student affairs. Prerequisite: VOED 3005, (Sp, Su, Fa) Studying and developing leadership in vocational education, using commonly accepted principles of leadership applied to vocational education.

VOED4303 Business Communications in Education (Sp, Su, Fa) Emphasizes applying and understanding principles of written and oral communication in the business/education field. Specific attention given to communication and organizations, using words effectively, communicating through letters and memoranda, communicating through reports, oral communication, and communicating today's business marketplace.

VOED4403 Nutrition Education and Counseling (Irregular) Nutrition education and counseling methods for dieters and other health professionals. Prerequisite: HES 1213, concurrent enrollment.

VOED4810C Problems in Vocational Education (Sp, Su, Fa) (1-6) Problems and issues relating to instruction in vocational and technical education. May be repeated for credit.

VOED481V Problems in Technical Education (Sp, Su, Fa) (1-3) A consideration of special problems relating to technical education. May be repeated for credit.

VOED5016 Cohort Directed Field Experience (Sp, Su, Fa) A minimum of 8 weeks will be spent in an off-campus school, at which time the student will have an opportunity to observe 6 classroom teachers and to teach under supervision. Prerequisite: cohort year status.

VOED5016C Cohort Teaching Internship (Sp, Su, Fa) A minimum of 10 weeks will be spent in an off-campus school, at which time the intern will have an opportunity to observe, to teach, and to participate in other activities involving the school and the community. Prerequisite: cohort year status.

VOED5103 Teaching Strategies in Vocational Education Methods and techniques in teaching vocational business, home economics, and industrial technology education.

VOED5113 Laboratory Management in Vocational Education, with evaluation of laboratory experiences in vocational business, home economics, and industrial technology education.

VOED5123 Current Design and Evaluation in Vocational Education: Behavior, legal, ethical, and technical issues in designing and evaluating programs in vocational education.

VOED5191 Applied Research (Sp, Su) Interpretation and evaluation of research in education for classroom utilization.

VOED5233 Cooperative Education/Apprenticeship (Sp, Su, Fa) Planning, organizing, and directing cooperative and apprenticeship programs in vocational education.

VOED5303 Trends and Issues in Business and Marketing Education (Sp, Su, Fa) Advances the student's knowledge, including the content and competencies in planning for teaching in business and marketing education. Considers history, current trends, issues, program content, and problems in business and marketing education.

VOED5403W Financial Accounting (Irregular) (1-8) May be repeated for 3 hours.

VOED574V Internship (Irregular) (1-18) VOED5803 Contemporary Issues in Vocational Education (Sp, Su, Fa) A study of issues, problems, and challenges pertaining to the goals, objectives, organization, and curriculum of the vocational education program.

VOED600V Master's Thesis (Irregular) (1-18) Prerequisite: candidacy.

Western Civilization (WCIV)

WCIV1003 Institutions and Ideas of Western Civilization (Sp, Su, Fa) Examination of major themes of Western history through the Renaissance and an evaluation of their contribution to contemporary life and culture. (Same as WCVIC 1003H, WCIV 1013H)

WCIV1013H Institutions and Ideas of Western Civilization II (Sp, Su, Fa) Examination of major themes of Western history since the Renaissance and an evaluation of their contribution to contemporary life and culture. (Same as WCVIC 1013H, WCIV 1013)
Fa) (First Offered Summer 2002, Formerly BADM 3003H) An inter-disciplinary course exploring events, concepts, and/or new discoveries that have had an impact on the field of business administration. Prerequisite: Junior or senior standing. May be repeated for 6 hours.

WCOB3010 Study Abroad (Sp, Su, Fa) (1-15) (First Offered Summer 2002, Formerly BADM 300) Open to undergraduate students studying abroad in officially sanctioned programs. May be repeated for 24 hours.

WCOB3016 Honors Business Strategy and Planning (Sp, Fa) Integrative study of the managerial decisions; introduces students to an understanding of strategic competitive ness and the way in which business strategy is formulated and implemented; uses a combination of theoretical and experiential approaches to designing business plans for key decisions, implementing these decisions, and monitoring their effects. Prerequisite: A business student must complete the pre-business requirements before enrolling for this course. WCOB 2013, WCOB 2023, WCOB 2033, and WCOB 2043 must each be completed with a grade of “C” or better. This course is restricted to Walton College students. (Same as WCOB 3016)

WCOB3101 Business Strategy and Planning (Sp, Fa) (1-3) (First Offered Summer 2002, Formerly BADM 310) Co-op allows students to earn one or two hours of credit per semester for work related to their major. Accumulated credit may not exceed six hours. Eligibility requires: 1) Junior standing in the college, 2) completion of the pre-business core, and 3) the prescribed GPA. See catalog for details. Prerequisite: Junior standing. Policies regarding completion of pre-business core. May be repeated for 6 hours.

WCOB410V Special Topics in Business (Irregular) (1-6) Special business topics of an interdisciplinary nature may be repeated for 6 hours.

WCOB4213 ERP Fundamentals (Sp, Fa) An introduction to enterprise resource planning systems. Students should gain an understanding of the scope of these integrat ed systems that reach across organizational boundaries and can change how a company does business. Implementation issues are covered, including the importance of change management. Prerequisite: WCOB 2023 and WCOB 2043 each with a grade of “C” or better.

WCOB4223 ERP Configuration and Implementation (Sp, Fa) The process of configuring and implementing an enterprise resource planning system. Business process analysis and integration. Students will develop a company and set up several modules in SAP R/3 for use. Develop understanding of how the business processes work and integrate. Prerequisite: WCOB 5213 with a grade of “C” or better.

WCOB6111 Seminar in Business Administration Teaching I (Sp) (First Offered Summer 2002, Formerly BADM 6111) This course in college level teaching is designed for graduate students and new college teachers with specific emphasis on the Business Administration learning and classroom management. The purpose of this course is to introduce graduate students to principles of teaching and learning and to prepare these future teachers to lifelong learners in the classroom as teachers. Prerequisite: graduate standing.

WCOB6121 Seminar in Business Administration Teaching II (Sp, Fa) (First Offered Summer 2002, Formerly BADM 6121) Given that the student has successfully completed Seminar in Business Administration Teaching I, this course is suggested as the second course in the sequence. It is designed to round out the teaching coursework for the student. Students will be assigned a class to teach by their respective department and will be supervised. In addition, all students in the class will come together for seminar discussion twice per month. Prerequisite: WCOB 6111 or equivalent.

WCOB6131 Seminar in Business Administration Teaching III (Sp, Fa) (First Offered Summer 2002, Formerly BADM 6131) This is an advanced course in college level teaching designed for graduate students and new college teachers with specific emphasis on the Business Administration learning and classroom management. The purpose of this course is to enhance graduate students’ knowledge of teaching, with an emphasis on the knowledge and classroom experience. This course will focus on current and advanced topics of teaching and learning, as well as research in teaching. Prerequisite: WCOB 6111 or equivalent, WCOB 6121 suggested.

Workforce Development (WDED)

WDED511 Foundations of Adult Education (Sp) History of the adult education movement in America, characteristics, interests, abilities, and educational needs of adults; the role of the public school in adult education; methods and techniques of conducting adult education. Prerequisite: WDED 6111 or equivalent.

WDED512 Principles of ABE/GED/ESL (Su) An introductory course to teaching adults at the Adult Basic Education, General Education Development (GED-High School Equivalency), and English as a Second Language (ESL) levels. Will address instructional needs assessment, curriculum development and evaluation, and techniques of teaching basic skills in various settings including public schools, vocational-technical schools, technical institutes, technical colleges, community organizations, and the workplace.

WDED523 Teaching Disadvantaged Adults (Su) A survey of the diversity of adult learners comprising that population described as educationally disadvantaged. Consideration given to various physical, mental, social, and economic factors which contribute to the uniqueness of this body of individual differing abilities.

WDED5313 Foundations of Human Resource Development (Fa) An overview of human resource development (HRD) in organizations. Focus on the integration of individual development (training), career development, and organizational development. Topics include strategic planning for human resource development, needs assessment, program development, evaluation of workplace learning theories, career development theories and methods, and application of organizational learning theories.

WDED5323 Organizational Analysis (Su) Provides a survey of types and sources of occupational information and methods of providing occupational-oriented experiences. Designed for teachers and future teachers of career education and is 1 of 2 required courses for vocational career orientation.

WDED5463 Applications in Career Orientation (Su) Student is introduced to various teaching methods and experiences that are designed for managing hands-on activities in career orientation class setting.

WDED551 Principles of Adult Learning (Fa) The learner in adult education programs is examined from young adulthood to death. Emphasis is given to understanding the effect this knowledge has on the teaching-learning process in adult education and to how adult education programs are designed to serve the uniqueness demanded by adult learning situations.

WDED5523 Diversity Issues and Globalization (Sp, Fa) This course emphasis is on diversity in the workplace. Current issues on globalization and diversity are examined. Policy issues pertaining to globaliza tion are examined. Prerequisite: Graduate standing.

WDED5533 Change Process (Sp) Processes available for changing adult behavior in both formal and informal situations. Emphasis on adult educator’s role as a change agent.

WDED5543 Computer Technology (Sp, Su, Fa) A study of computer technology as it relates to vocational and adult education. Brief introduction to computers, overview of hardware and software, hands-on learning of word processor, spreadsheet, data base, desktop publishing, telecommunication, graphics, CAD/CAM, and/or CAI/CMI packages are covered.

WDED5553 Career Development in the Workplace (Su) This advanced level course is intended for career development professionals and/or subject matter experts interested in improving their career development skills within a structured or unstructured learning environment. The emphasis in this course is on gaining career development techniques and planning formal and informal career development strategies for the individual or the organization.

WDED5563 Introduction to Distance Learning (Sp) This course is designed to build a knowledge base about distance learning environments, especially online learning. This course emphasizes interaction among peda gogical models, instructional models, and learning technologies. The content is contextualized within higher learning, k-12 schools, and corporate training.

WDED5573 Instructional Materials (Fa) A comprehensive course designed to give students the opportunity to understand, prepare, and test materials leading toward excel lent instruction.

WDED571V Independent Study (Sp, Su, Fa) (1-3) May be repeated for 3 hours.

WDED572V Workshop (Sp, Su, Fa) (1-3) Prerequisite: advanced graduate standing. May be repeated for 3 hours.

WDED574V Internship (Sp, Su, Fa) (1-18)
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